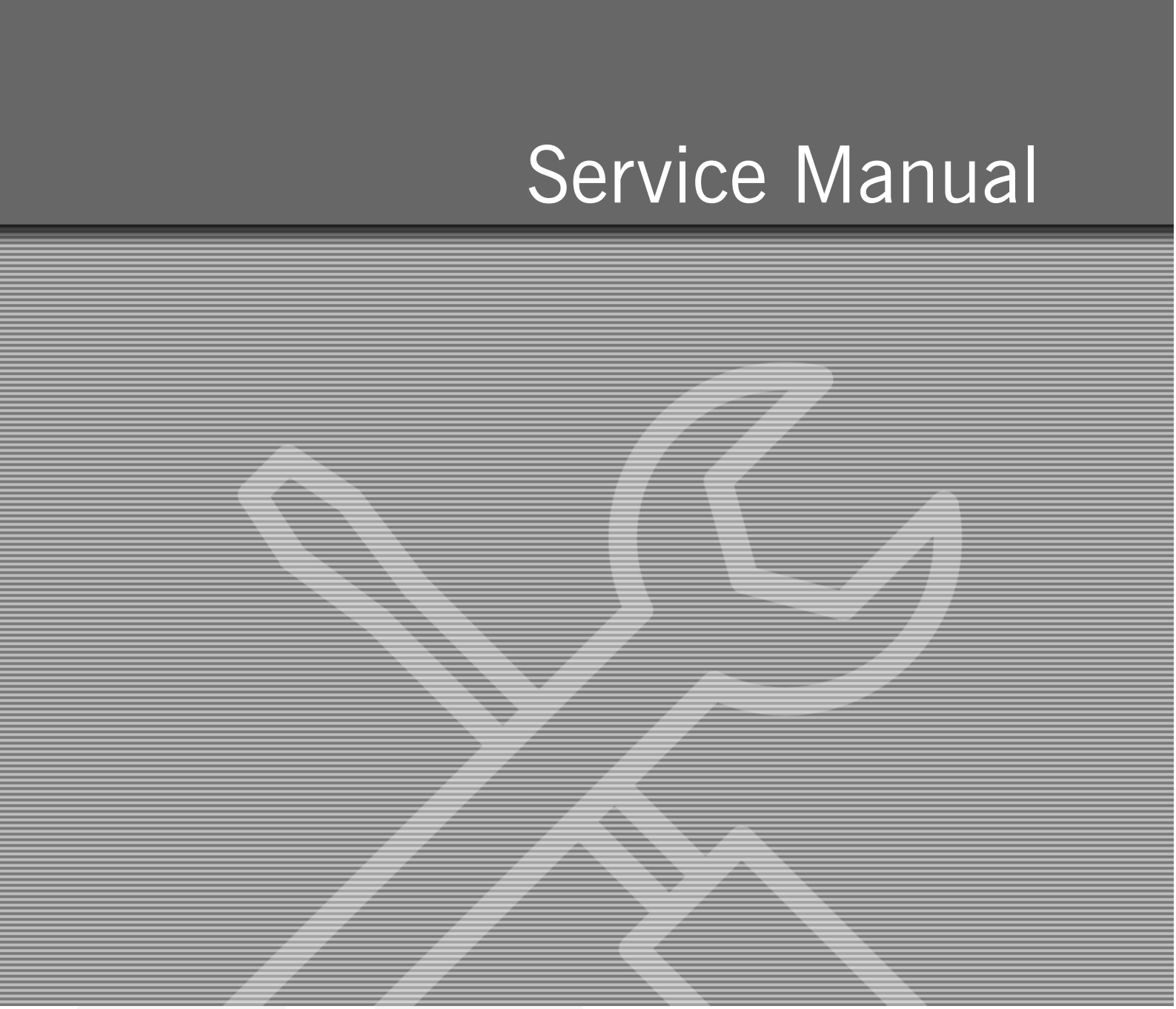
Service Manual

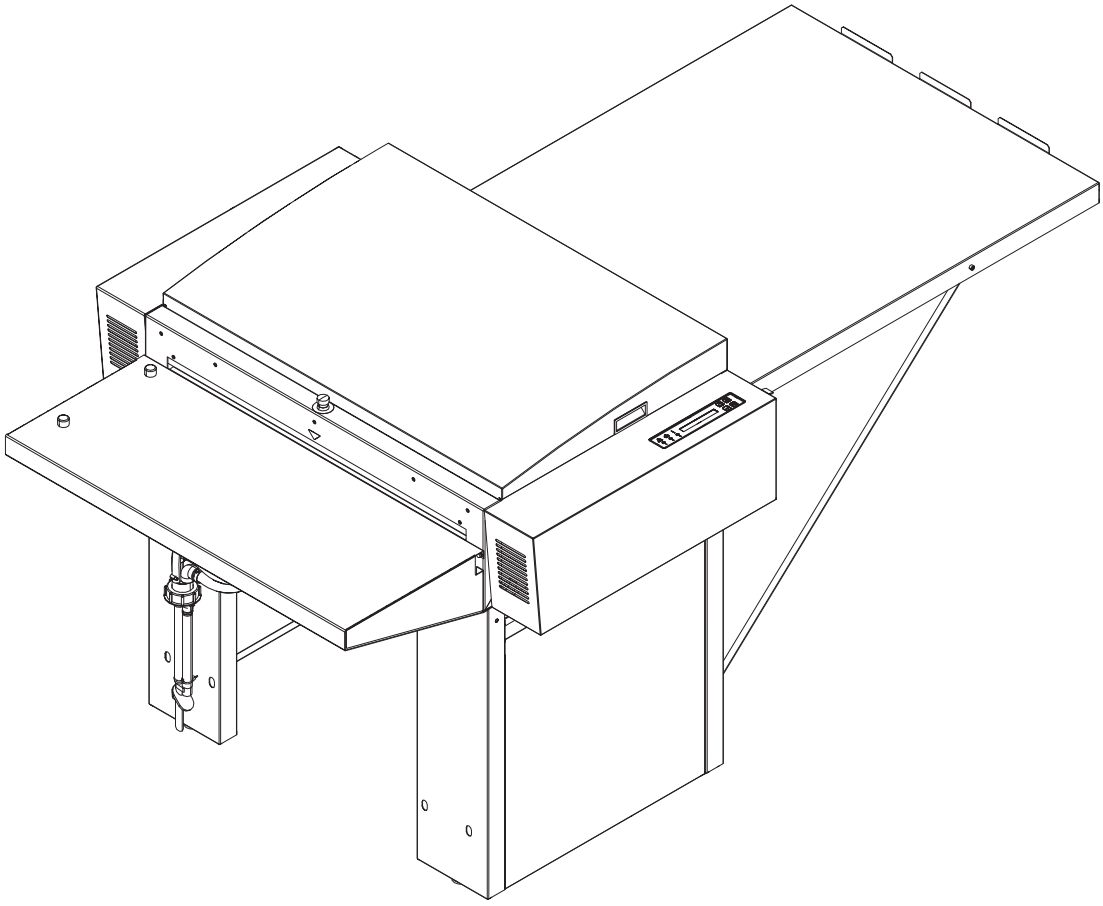


Cleaning Unit+ 85/120

GLUNZ & JENSEN

Service Manual

Cleaning Unit+ 85/120



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This manual is for Service Technicians only.

The directions given must not be followed by unauthorized personnel.

Always read the *Safety Instruction Manual part No 21741* before installing or operating the equipment.

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Part 0: General information

Reservations

- This manual was written and illustrated using the best possible information available at the time of publication.
- Any differences between this manual and the equipment reflect improvements introduced after the publication of the manual.
- Changes, technical inaccuracies and typographic errors will be corrected in subsequent editions.
- As a part of our policy of continuous improvement, we reserve the right to alter design and specifications without further notice.

Notes, cautions, and warnings !

Throughout the manual notes, cautions, and warnings are written in bold like the example below:

Always replace a fuse with one of the same size and rating as the old one.

Symbol	Meaning	Explanation
	Note	The operator should observe and/or act according to the information in order to obtain the best possible function of the equipment.
	Caution	The operator must observe and/or act according to the information in order to avoid any mechanical or electrical damage to the equipment.
	Warning	The operator must observe and/or act according to the information in order to avoid any personal injury.

Other manuals

Please see description of "Manuals available for the plate unit" later in this chapter.

The unit

Approvals

- Approvals will appear from the labels attached to the name plate or the frame part of the unit.

Unintended use of the equipment

Glunz & Jensen A/S do not take any responsibility for any damage or accidents caused by unintended use of the equipment:

- As the equipment is certified by accredited test laboratory (UL International Demko A/S) it is absolutely prohibited to make any modifications, electrical nor mechanical, of the equipment. If however this prohibition is disregarded, Glunz & Jensen's warranty will no longer apply and the certification labels for UL, C-UL, and CE certification of the equipment shall be removed as the certification will no longer apply to the equipment.

Intended use of the equipment

- Development of photographic materials as specified in “Technical specifications” in Part 1 in this manual.

Installation

- Never install the unit in explosive environments.
- It is the responsibility of the owner and operator/s of this unit that the installation is made in accordance with local regulations, and by engineers authorized to carry out plumbing and electrical installations.
- Installation, service and repair must be performed only by service technicians who are trained in servicing the equipment.
- The manufacturer cannot be held responsible for any damage caused by incorrect installation of this unit.
- The unit is intended for installation in a restricted access location only.

Technical data

- Observe technical data from the unit name plate and from Part 1 in this manual.

Chemicals

- It is the responsibility of the owner of this equipment that data is available concerning possible health risk from the chemicals used with the equipment.

"End of lifetime" disposal

The equipment is designed for easy disassembling. All disposal of parts from the machine must be made according to local regulations with special regards to following parts:

- For recycling purposes significant components are marked with material specification according to the ISO 11469 standard.
- PVC, tank etc., must be sent to a waste deposit with recycling in view. Alternatively the PVC can be incinerated at a suitable incinerating plant.
- PCB's and other electric equipment must be sent to a suitable waste deposit.

Service assistance

- If help is needed to correct any problem with the equipment, please contact your local supplier.

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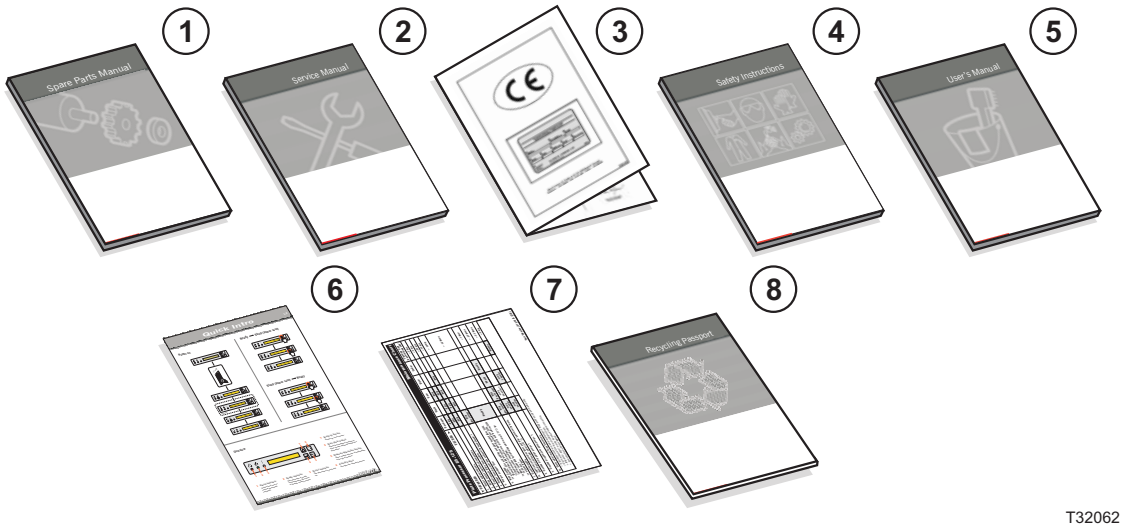
Manuals

A complete set of manuals consists of the following:



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Service manuals

The manuals listed below are for service technicians only. In addition the service technicians will need the manuals listed opposite as “User Manuals”.

unit Spare Parts Manual (1)

Language: English
Contents: Spare parts

Processor Service Manual (2)

Language: English
Contents: Technical specifications
Installation
Functional description
Maintenance
Troubleshooting
Electrical diagrams

User manuals

User manuals available for the equipment:

CE Declaration of Conformity (3)

Languages: Various
Contents: Survey of the directives to which the equipment conform

Safety Instruction Manual (4)

Languages: 28
Contents: General safety information

User's Manual, Plate Processor (5)

Languages: 5
Contents: Operating and cleaning procedures

Quick Guide, Control Panel (6)

Languages: 5
Contents: Quick guide to control panel user functions

Maintenance Chart, Plate Processor (7)

Languages: 5
Contents: Maintenance instructions

Keep the manuals with the unit for reference at all times.

Part 1: Technical specifications

General environmental Information

The cleaning unit does not contain

- Ozone depleting substances according to Montreal protocol.
- Asbestos.
- Polychlorinated biphenyl or Poly- Cyclohexylenedimethylene Terephthalate.
- Mercury.
- Cadmium.
- Lead as additive to plastic parts.

Plastic parts

Plastic parts > 50g (1.76 oz) are marked according to ISO 11469.

Batteries

No batteries in this equipment.

End of life

Estimated product life: 10 years
Spare parts and service period: 7 years after last sales.

Recycling

The unit should be disposed at a certified appliance recycling centre or processing centre.
Recycling Passport with specifications of components and materials used in this unit is available on www.glunz-jensen.com/support.

Packaging

Plastic packaging materials are marked according to ISO 11469.

Noise emission

Acoustical noise according to ISO 11201:1996
Sound pressure level
Operational mode: < 61 dB
Stand-by mode: < 41 dB

Chemical emissions

Ozone:	0 mg/m3
Dust:	0 mg/m3
Styrene:	0 mg/m3

Heat emissions

Clean: 1560 W (5320 BTU/hour)
Stand-by: 42 W (140 BTU/hour)
Mechanical specifications

Mechanical specifications

Performance

	85	120
Plate types	Chemistry-free negative working non-ablative thermal CTP plate	
Plate width min.- max.	230 - 850 mm (9.1 - 33.5”)	230 - 1200 mm (9.3 - 47.2”)
Plate length min.- max.	Unit with exit table 300 - 1100 mm (11.8 - 43.3")	Unit with exit table 300 - 1200 mm (11.8 - 47.2")
Plate thickness min.- max.	0.15 - 0.30 mm (0.006 - 0.012”)	0.15 - 0.30 mm (0.006 - 0.012”)
Plate speed	40 - 120 cm/min (15.7 - 47.2“/min)	40 - 120 cm/min (15.7 - 47.2“/min)
Scrub roller speed (revolutions per min.)	120 rpm (Fixed)	

Tank capacities

	85	120
Cleaning section, total ex. filter, pumps etc.	20 l (5.3 US gal.) standard 1 x 20 l container on the floor and pumps up to the tank and flow back in the container.	
	40 l (10.6 US gal.) optional 2 x 20 l containers on the floor and pumps up to the tank and flow back in the containers.	

Temperatures

	85	120
Cleaning section min. - max.	no heater in the wash out out liquid	

Dryer, process min. - max.	55 °C (131 °F) (default)

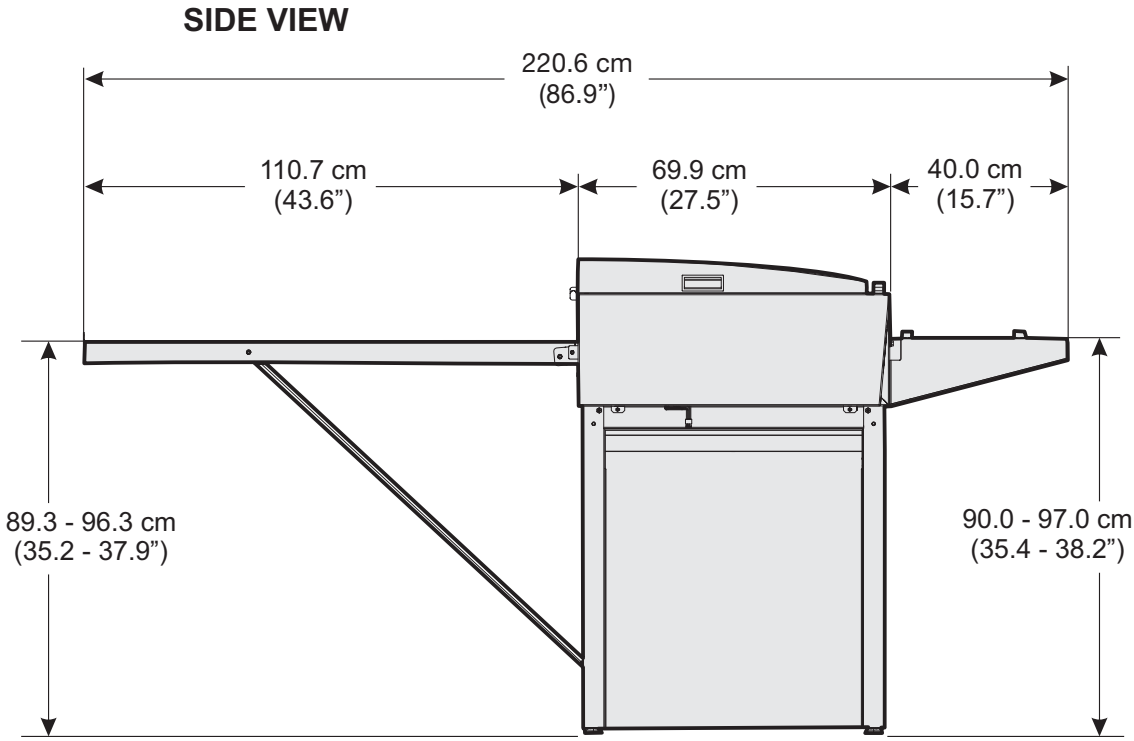
Water requirements

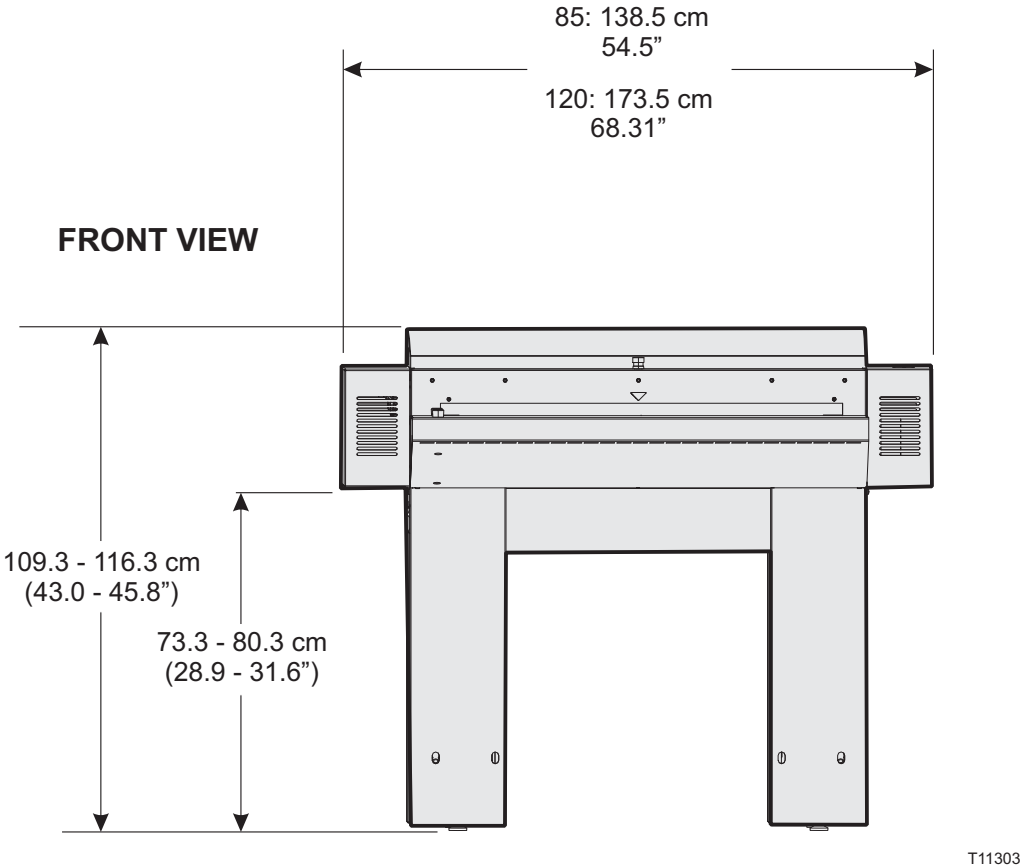
	85	120
Pressure	no water supply	

Weights

unit type	85	120
Weight, empty	127 kg (280 lbs)	153 kg (337 lbs)
Weight, shipping	152 kg (335 lbs)	184 kg (405 lbs)

Dimensions


SIDE VIEW
220.6 cm
(86.9”)
110.7 cm
(43.6”)
69.9 cm
(27.5”)
40.0 cm
(15.7”)
89.3 - 96.3 cm
(35.2 - 37.9”)
90.0 - 97.0 cm
(35.4 - 38.2”)


85: 138.5 cm
54.5”
120: 173.5 cm
68.31”
FRONT VIEW
109.3 - 116.3 cm
(43.0 - 45.8”)
73.3 - 80.3 cm
(28.9 - 31.6”)
T11303

Electrical specifications

Power supply

The requirements below are specifications for preparing the installation protection. It is important to prepare the fuses/circuit breakers with adequate capacity as specified here.

Specifications on the unit's name plate is the actual input current and will thus not be identical to below mentioned.

	Supply/fuse	Recommended cable type
EUR	Single Phase, 1W + N + PE ~230 V / 1 x 8 Amps, 50 - 60 Hz	Min. 3 x 1.5 m^2, type H03VV-F
US	Single Phase, 2W + PE 230 V / 2 x 8 Amps, 50 - 60 Hz	Min. 3 x 14 AWG, type SJ or SJO
JAP	Single Phase, 2W + PE 200 V / 2 x 7 Amps, 50 - 60 Hz	Min. 3 x 14 AWG, type SJ or SJO
All	Voltage tolerance ± 10%	

Fuses

The fuses must have a breaking capacity of min. 100kA.
If using automatic circuit breakers make sure that they are Type D.

Power consumption

	Power consumption at ...
EUR/ US	230 VAC operation: approx. 1,56 kWh (5320 BTU/hour)
	Stand-by: approx. 0,042 kWh (140 BTU/hour)

Noise level

See “General environmental information” on page 1-1.

Part 2: Installation

Installation hours

How many working hours are planned for the installation?

Installation hours for off-line machine:

- Provided the machine is unpacked and will stay in the room and electrical installation is in place, the estimated installation time is max. 2.
- If the machine must be disassembled to get into the room before installation add another 4 - 5 hours for disassembling and reassembling.
- Unpacking and transportation from pallet to the floor, add 2 – 3 hours.

Standard installation hours for on-line machine:

- Provided the machine is unpacked and will stay in the room and electrical installation is in place, the estimated installation time, including interface installation and connection to the setter, is max. 4 hours.
- If the machine must be disassembled to get into the room before installation add another 4 - 5 hours for disassembling and reassembling.
- Unpacking and transportation from pallet to the floor, add 2 – 3 hours.

Customer training hours

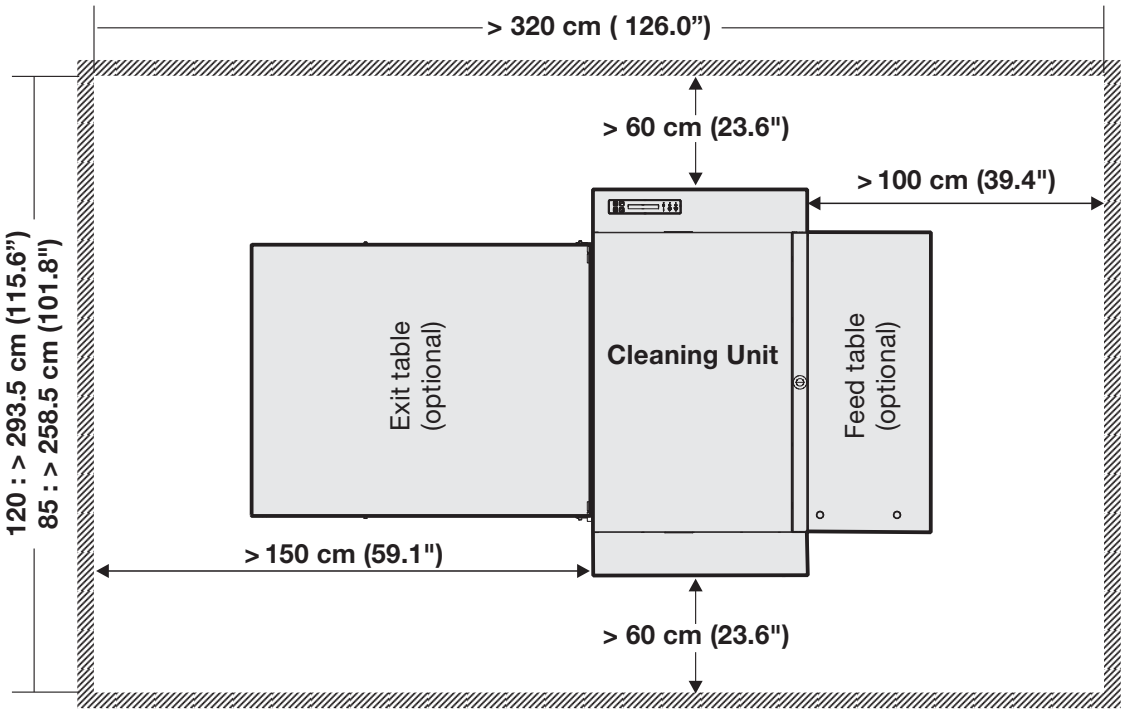
How many working hours are planned for training the customer?

- Introduction and training of the customer (daily user) in normal use of the unit, operating, etc., is estimated to 2 – 3 hours.
- Training of the customer (daily user) in normal daily cleaning and maintenance is estimated to 2 – 3 hours.

Preparing the installation site

Space requirements

Make sure that the free space around the machine at the installation site makes servicing possible.
The recommended minimum free space around the machine is specified in the illustration below.


> 320 cm (126.0”)
> 60 cm (23.6")
> 100 cm (39.4")
120 : > 293.5 cm (115.6”)
85 : > 258.5 cm (101.8")
Exit table (optional)
Cleaning Unit
Feed table (optional)
> 150 cm (59.1")
> 60 cm (23.6")

T11302

CTP online

For the CTP On-line cleaning units the space requirements at the unit front has to be decided separately.

Power outlet

If not already there, a main power outlet should be installed in the room, where the machine will be situated. Max. distance to the machine 2 m (6 ft.).

See power outlet and fusing requirements earlier in this manual.

Cleaning facilities

It is essential to have easy access to a sink and a water tap with hot water where rollers, guides, and brushes can be washed.
The minimum recommended size of the sink is:
85 cm units: 100 x 40 cm (39.4 x 16")
120 cm units: 140 x 40 cm (55.1 x 16")

Drain connections

Never lead drain hoses from the developer section to a drain, as most developers are strong pollutants and it is strictly forbidden to empty this type of chemistry into the public sewer system.

When establishing central reception systems for waste chemicals, copper or brass should not be used in the draining system as the chemicals involved are highly corrosive.
Therefore plastic or rubber is recommended.
Check with the chemicals supplier for details.

Environmental requirements

Provide a heating and ventilating system capable of maintaining room temperature between 15 and 25°C (59 and 77°F) and relative humidity on max. 80%.

Capacity of the air condition/ventilation system must be adequate for heat emission (see "Power consumption" on page 1-5).

Power cable

The unit is provided with an appliance inlet for connection of a detachable power cord. Please observe that the power cord used must be rated:

Min. 250 VAC - 3 x 1.5 mm^2 (14 AWG) and fulfill local requirements.

Unpacking/preparing the cleaning unit

Transport

Transport the crated cleaning unit as close to the final installation site as possible using f.ex. a hand powered pallet forks.
Please note that the cleaning unit model 85 weights app. 152 kg (app. 335 lbs) including crate, 120 model weights app. 184 kg (405 lbs) including crate, and various interface kit weighs app. 80 kg (app. 176 lbs).

Unpacking

Carefully unpack the machine and check that it has not been damaged in any way during transportation. Also check that all parts are present according to the enclosed packing list.

Transport security Items

During transportation many of the parts outside and inside the cleaning unit have been secured using tape, plastic, strips, and various pieces of sponge rubber. Make sure to remove all items.

Installation kit

An installation kit is included with the cleaning unit. It comprises the different parts necessary to make the installation.
See enclosed packing list for further information.

Transport through narrow doorways

Dependent on the width of the door(s) through which the unit has to be transported to the installation site, the Service Technician may have to perform the actions described in the table below:

If width of the doorways are …

If width of the door is…	Then…
> 1000 (39.8") mm	No action is required as the crated unit can be transported immediately to the installation site.
1000 - 699 mm (39.8 - 27.5")	The Service Technician has to unpack the unit.
< 699 mm (27.5")	The Service Technician has to unpack and strip down the unit.

Lifting the unit off the pallet

Remove all rollers, brushes, and guides.

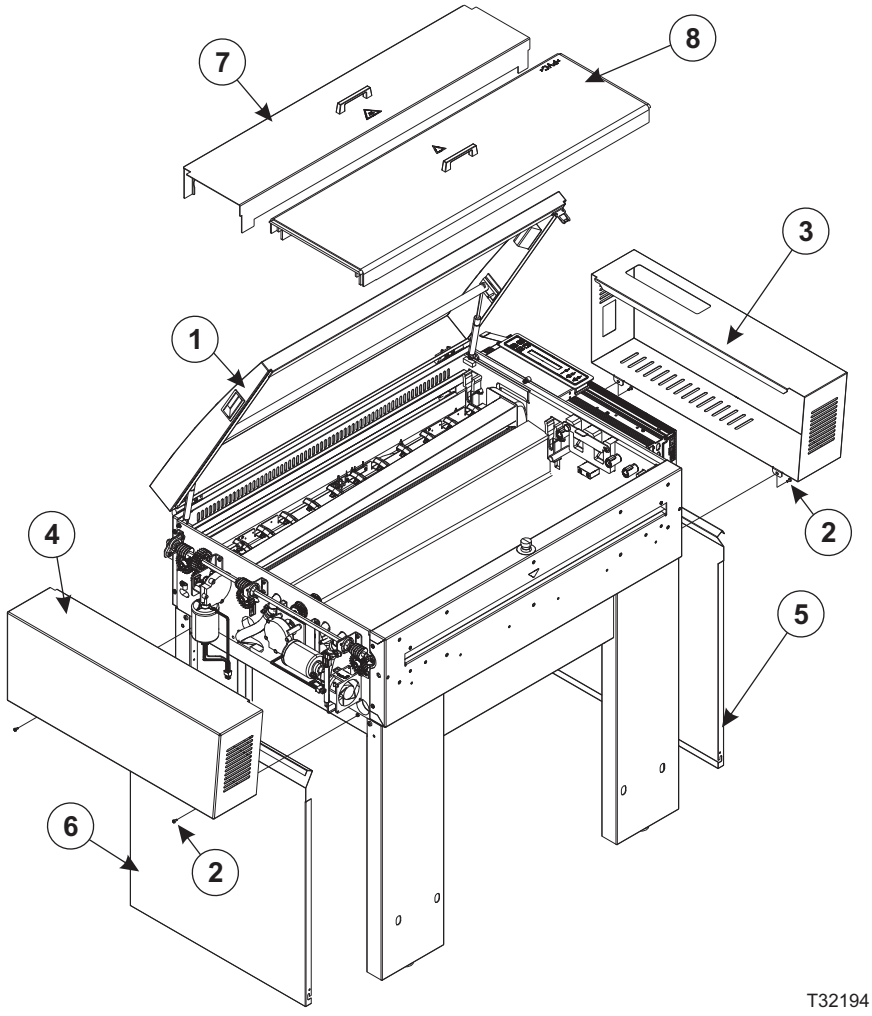
- Two persons are needed on each side of the unit for lifting. Please note that the cleaning unit model 85 weights app. 127 kg (app. 280 lbs), 120 model weights app. 125 kg (app. 337 lbs).
- Lift the unit down the pallet and place it on the installation site.

Do not use a fork lift truck or a pallet mover to lift the unit off the pallet.

Removing fenders and covers

(See illustration below).

- Open the top cover **(1) .**
- Remove the screws **(2)** securing the left and right fenders **(3, 4)** and lift off the fenders.
- Remove the dryer cover **(7)** and condensation lid **(8)**
- Remove the side stand panels **(5, 6)**.



Electrical installation

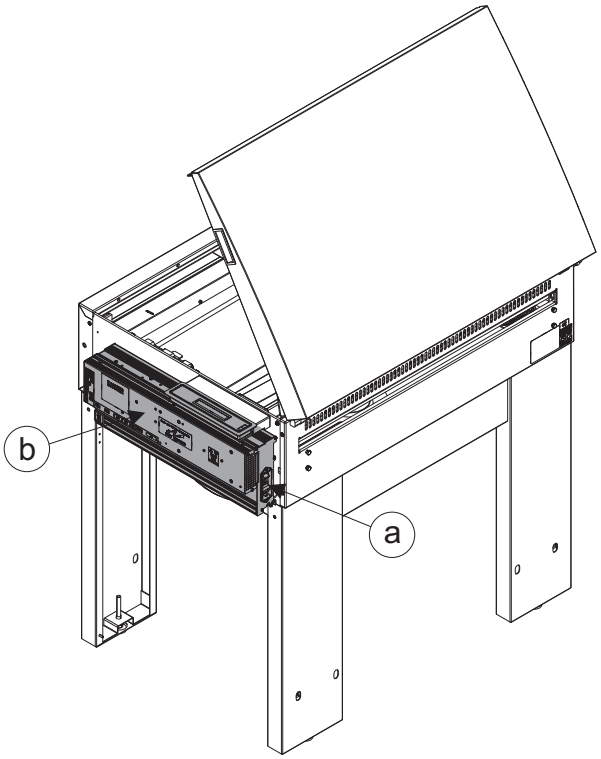
General

Electrical installation must conform to local regulations and guidelines.

The unit is Class 1 equipment. Therefore, the unit must be connected to earth to avoid electrical shocks.

Main power connections

The main power connection must be made to the main connector **(a)** in the electronics cabinet **(b)** by the delivered cable.Check the unit connections (see page 1-5) for the current wiring type.



T32404

Stacker connection

Not all models (accessory equipment). See separate stacker manual.

Processor/setter connections (ctp online processors)

Not all models (accessory equipment). See separate interface manual.

Mechanical installation of the setter can be done now. Software settings and test need to be done after the completion of the installation of the unit.

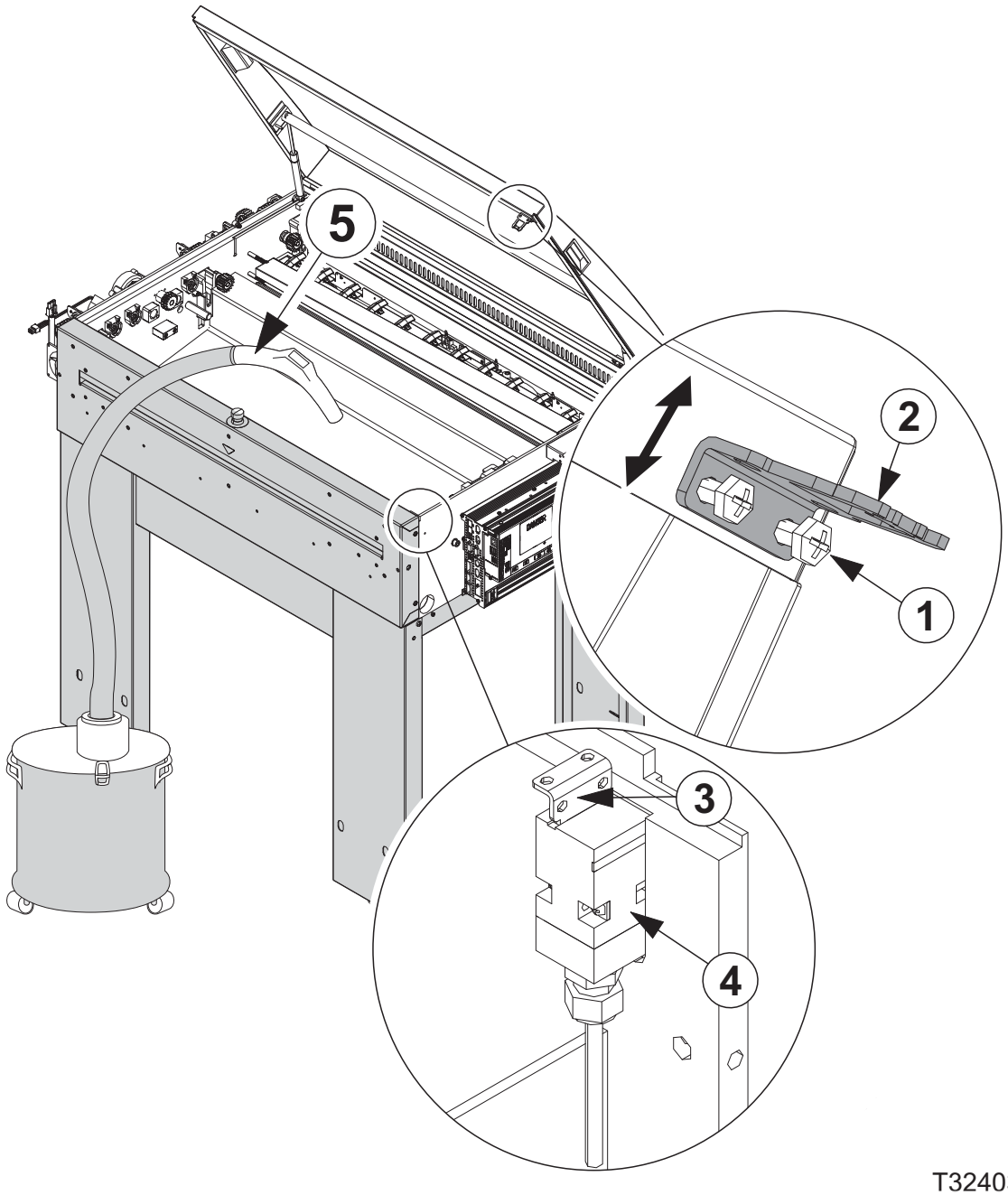
Mechanical installation

Adjustment of lid switches

See illustration below.
Adjustment of the lid switches may be needed after leveling of the unit.
Loosen the screws **(1)** and adjust the actuator **(2)** sidewards until it fits smoothly **(3)** into the switch **(4)**.

Cleaning the unit tanks

Vacuum clean the tank **(5)** to remove sponge rubber remains and dust etc.

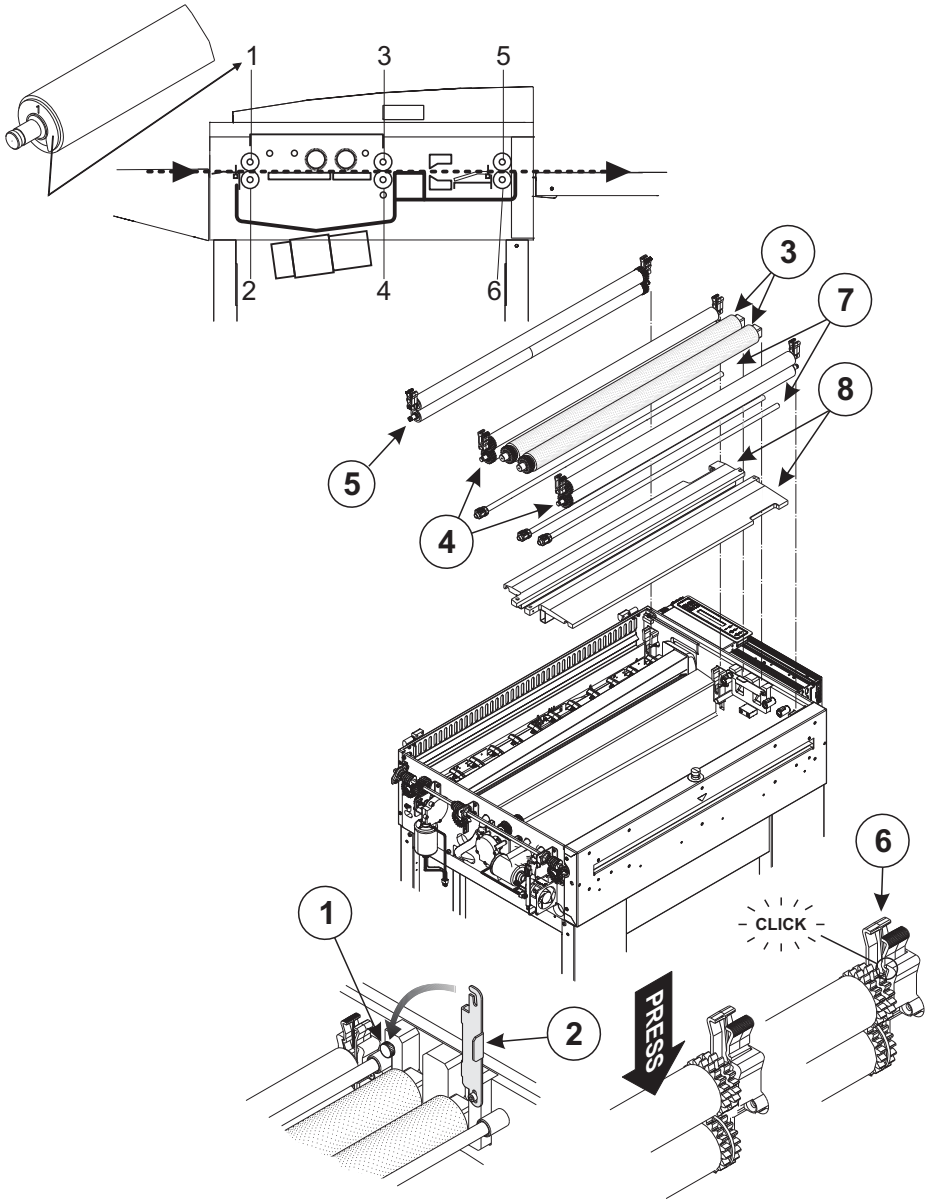


T32403

Inserting the scrub rollers, rollers, spray tubes and guides

(See illustration below).

- First insert the guides **(8)** placed on the crate under the processor during transport due to security reason.
- Insert the spray tubes **(7)**.
- Insert the transport rollers **(4, 5)** in their proper bearing blocks.
- Press down in each side on the upper rollers as indicated **(NB! Drive side first)** to lock them.
  When the roller bearings **(6)** "click" they are properly secured.
- First insert the scrub rollers **(3)** underneath their respective drive gears then lower them into the right side bearing block.
- Lower the scrub roller lock bracket **(2)** then tighten the finger screw **(1)**.
- The illustration shows the roller configuration.
  Each roller is marked with a small number. Install the rollers by referring to the roller numbers shown in the illustration.



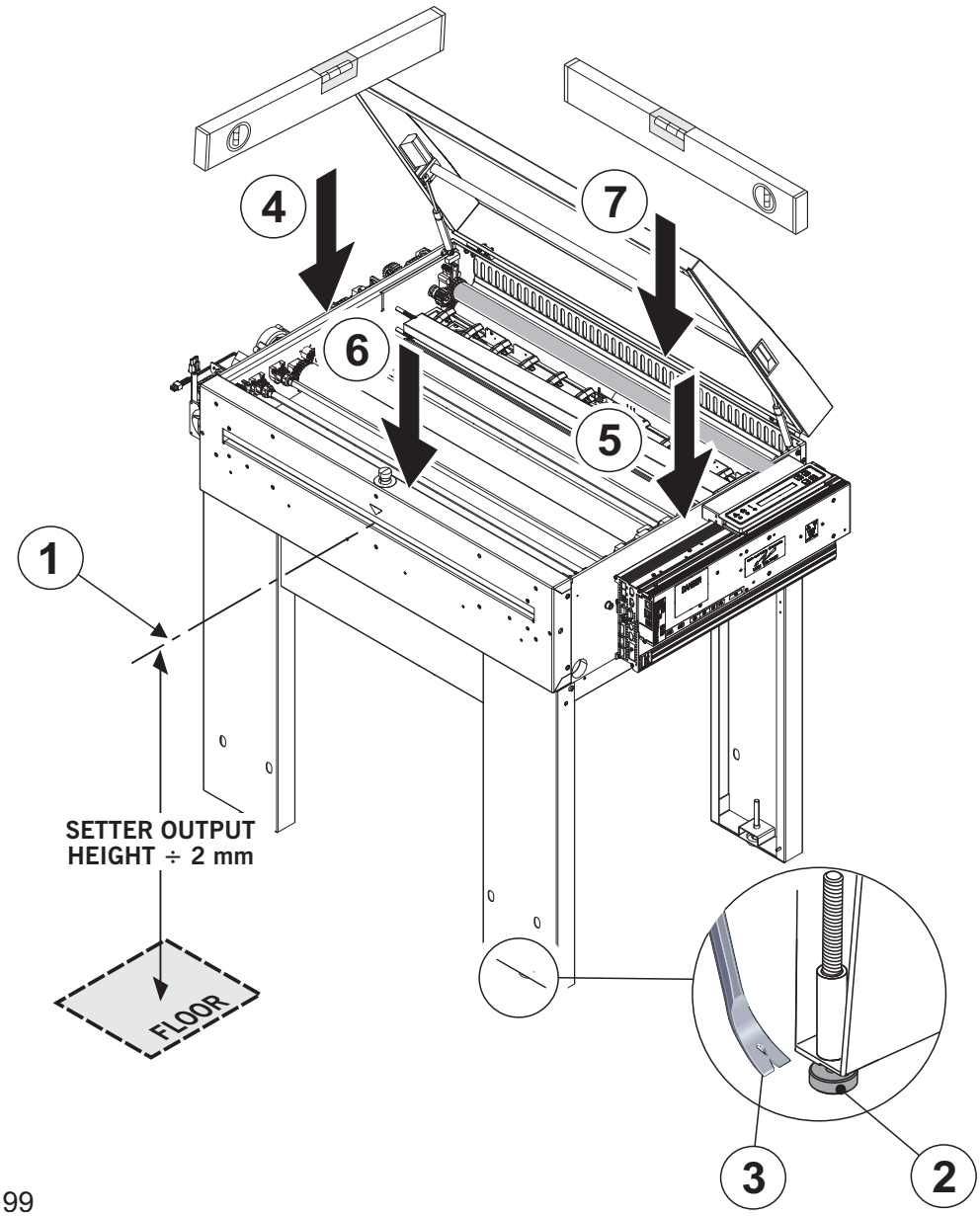
T32198

Levelling

The machine must be placed on a steady surface, so that it does not shake easily.
Do not rely on the floor being absolutely in level.

(See illustration below)

- Use the adjustable feet **(2)** in the legs to level out the cleaning unit.
  If necessary use ex. a crowbar **(3)** to lift the legs slightly before being able to turn the feet.
- Level out the cleaning unit lengthwise by placing a spirit level on the left **(4)** and right **(5)** tank side.
- Level out the cleaning unit crosswise by placing the spirit level on a roller at the front **(6)** and rear **(7)** of the cleaning unit.
- Check levelling in all 4 positions and make final levelling if required.

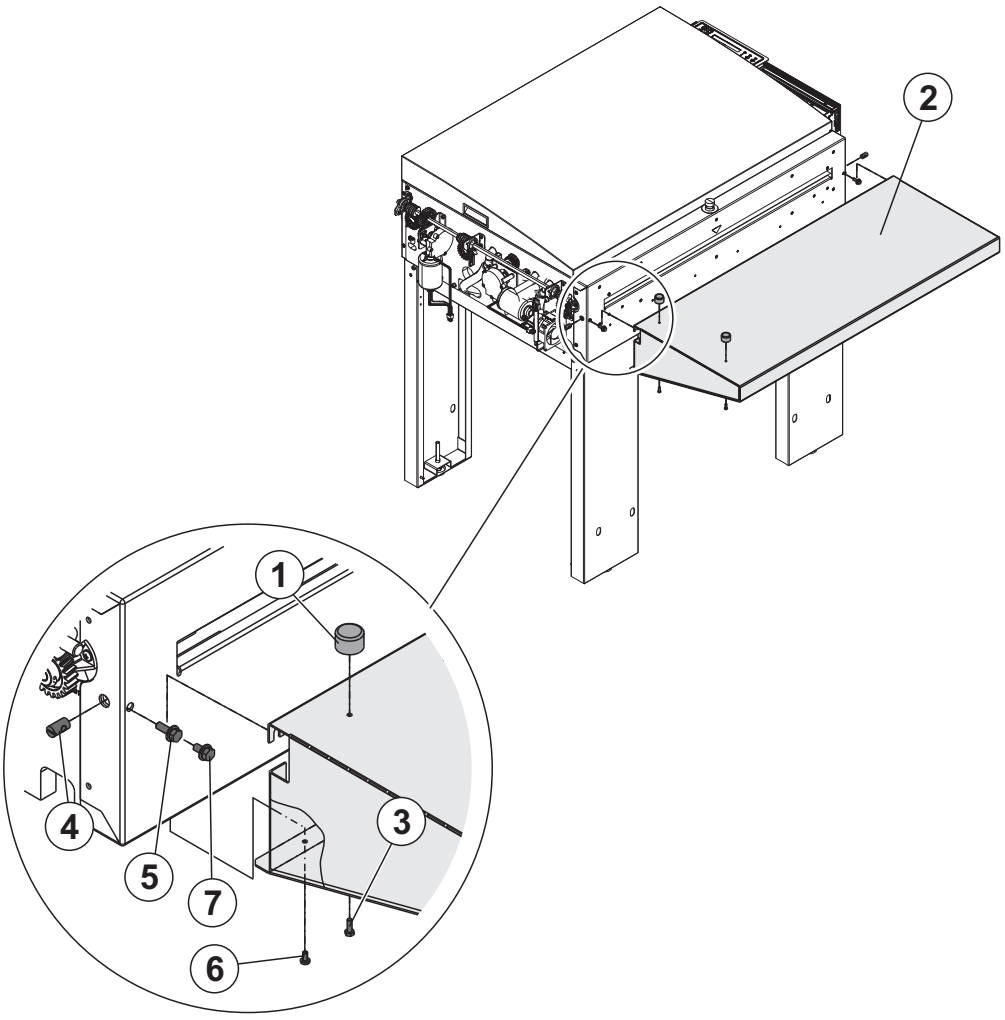


T32199

Mounting the feed table

Offline units only!

- Mount the guide pins **(1)** on the feed table **(2)** by using the screws **(3)**.
- Insert the nuts **(4)** into the tank wall through the front panel and adjust them with the screwdriver if needed to ensure that the screws **(5)** fit the nuts **(4)**. Do not tighten the screws.
- Hang the feed table **(2)** on the screws **(5)** and then tighten the screws.
- Secure the feed table from the bottom by using the two screws **(6)**.

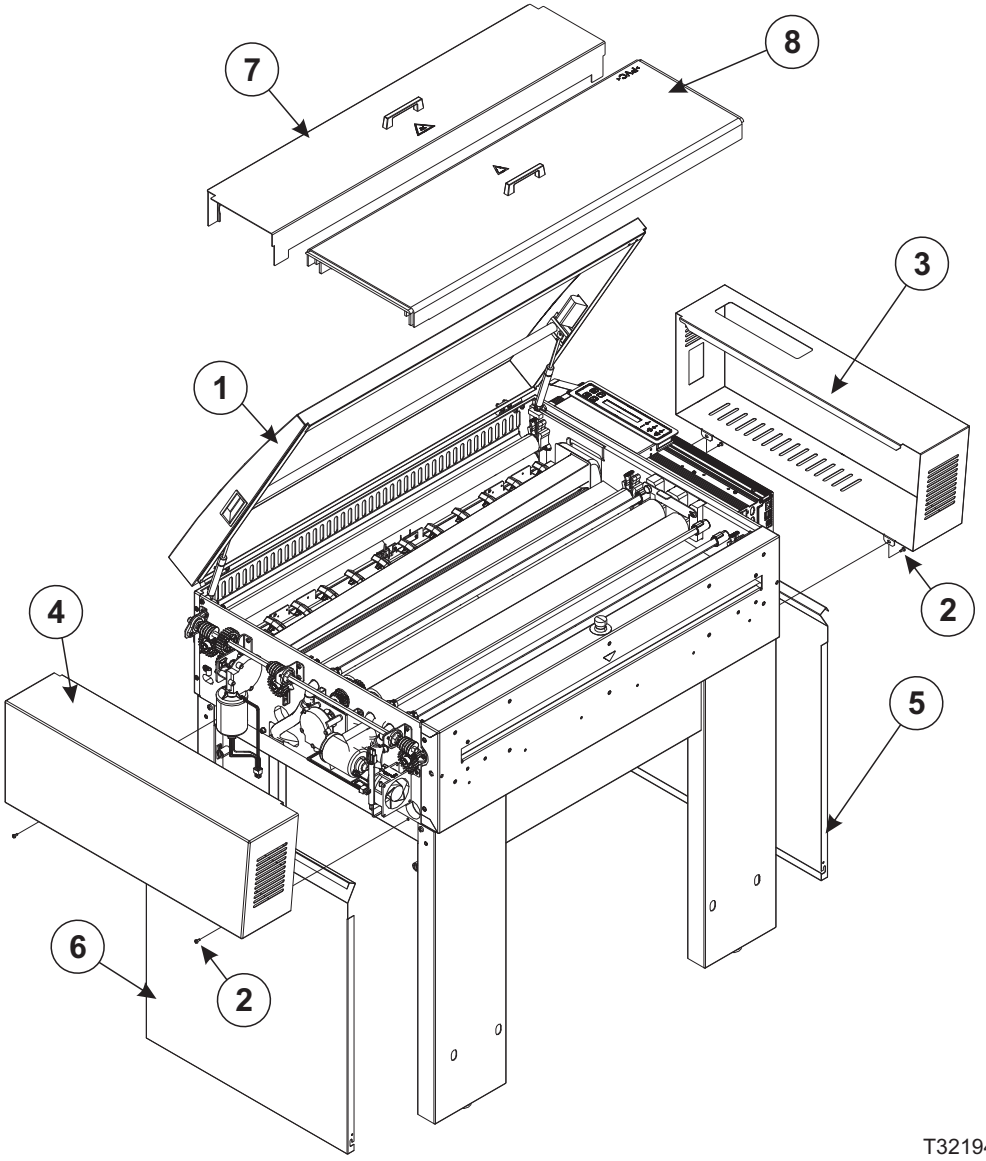


T32200

Mounting fenders and covers

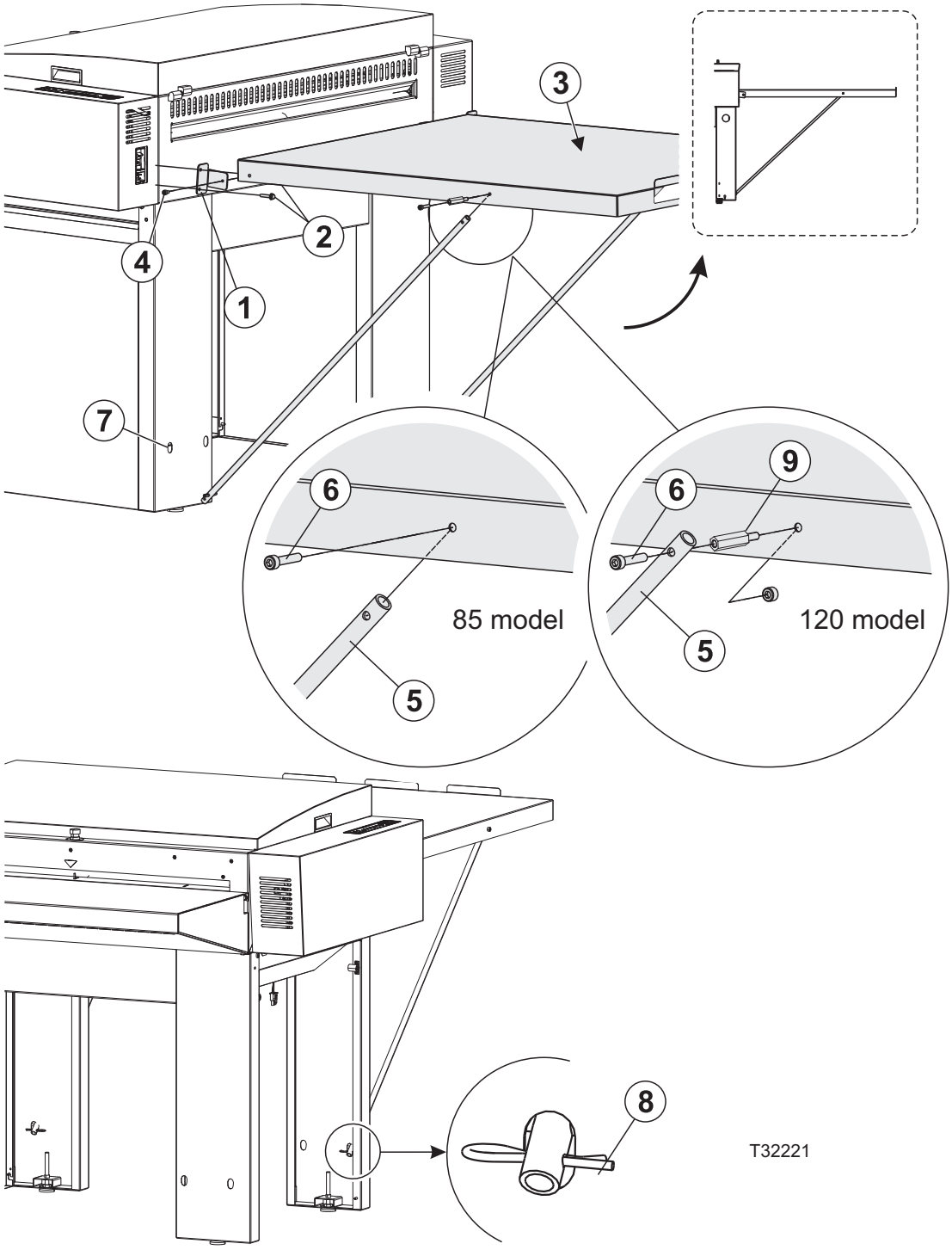
(See illustration below).

- Fit the left and right fenders **(3, 4)** and secure them using the screws **(2)**.
- Place condensation lid **(8)** and dryer cover **(7)** in their proper positions.
- Close the top cover **(1)** following this sequence.
- Mount side stand panels **(5)**.



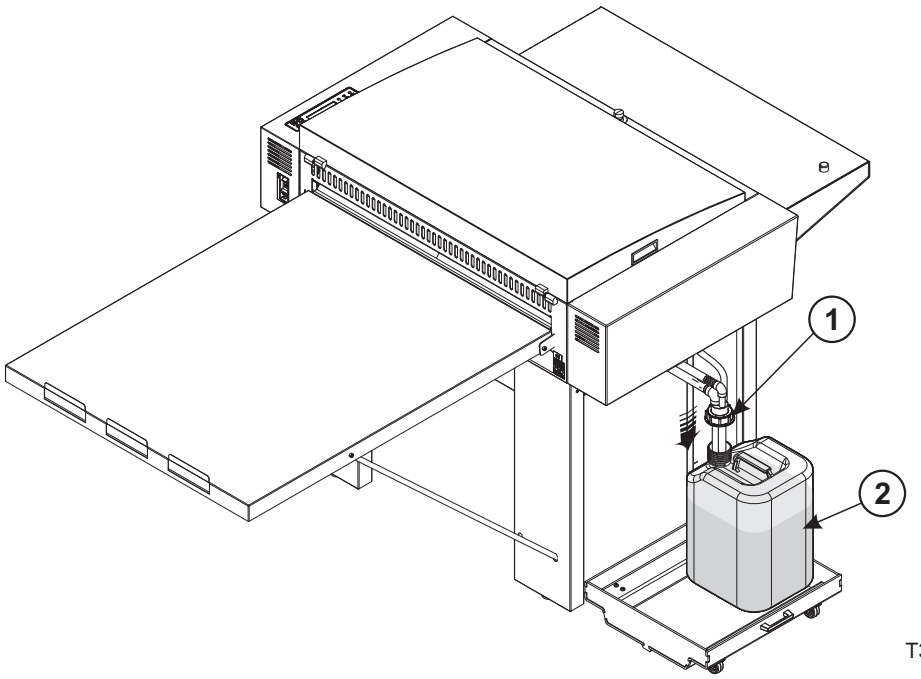
Mounting the exit table

- Mount the two brackets on the exit table **(1)** by using the two screws **(4)**.
- Mount the exit table by using the two screws **(2)** and lift it to the horizontal position.
- Insert the supports **(5)** from the inside of the exit table **(3)** and secure them by using the screws **(6)**. For 120 model mount the spacers **(9)** from the outside.
- Lead the supports through the lower holes in the rear panel **(7)** and secure them inside using the enclosed locking split pins **(8).**



Connecting the suction/waste tube

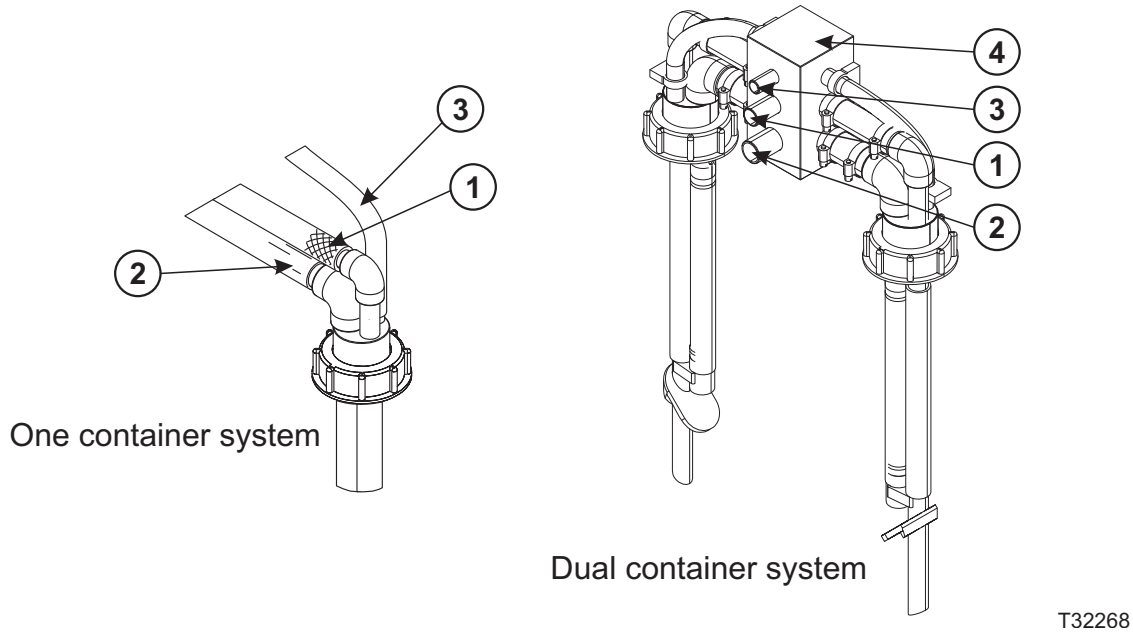
- Enter the suction/waste tube **(1)** into a full gum container **(2)**. Attach it using the tube's screw cap.



Installation of dual container system

Not all models!

- Dismount the suction **(1)**, waste **(2)** and air hose **(3)** from the original one container suction system.
- Connect the hoses to the distributor block **(4)** to their respective positions.



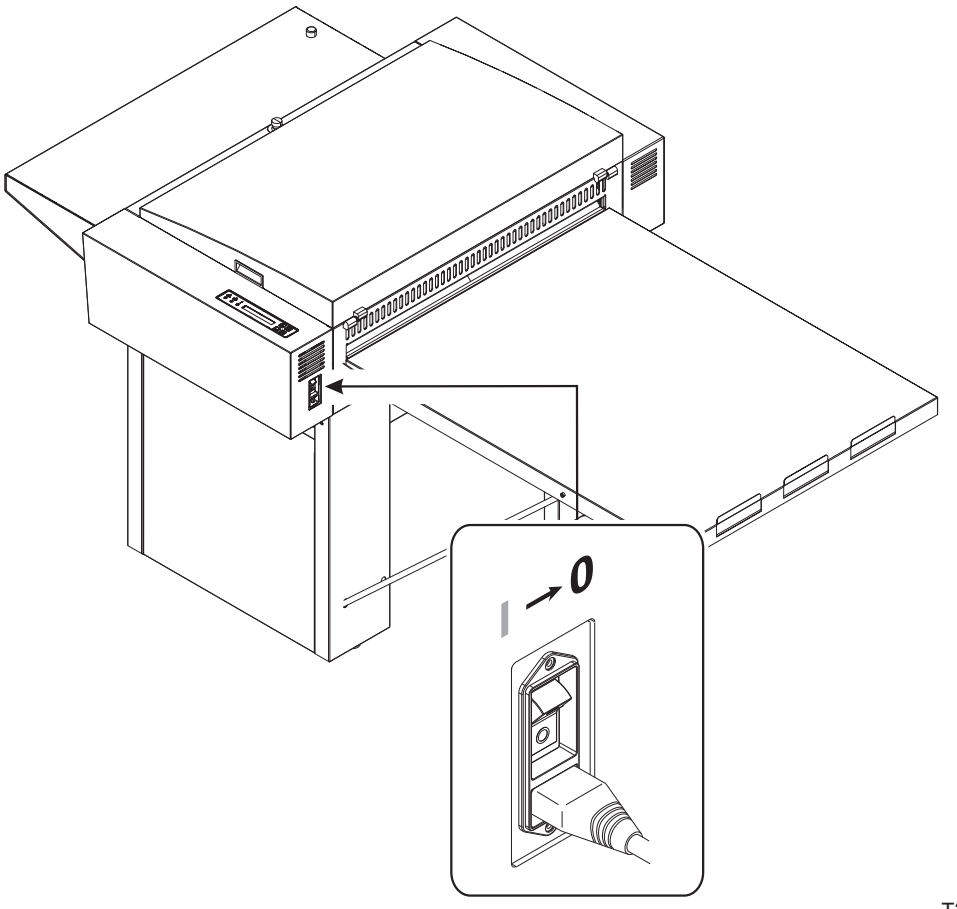
Power supply cable

The cable/plug required for main power connection is delivered with the cleaning unit. The power supply table on page 1-5 shows recommended power supply cables for the unit.

The conductors in the power supply cable must be of copper.

When deciding what type of cable to use take into account the chemical resistance (chemicals may leak onto cable) and the mechanical resistance (operator may step onto cable).

Provide for additional cable protection, e.g. cable covers, if cable is exposed to heavier transport such as fork-lift trucks etc.



T32202

Installation of setter interface

If the unit is part of an online system, now make the installation of the setter interface as described in the **Interface Manual.**

When installation of the setter interface is complete please return to this manual for finishing the entire installation.

Part 3: Functional description

General

(See illustration below)
The unit holds two major sections:

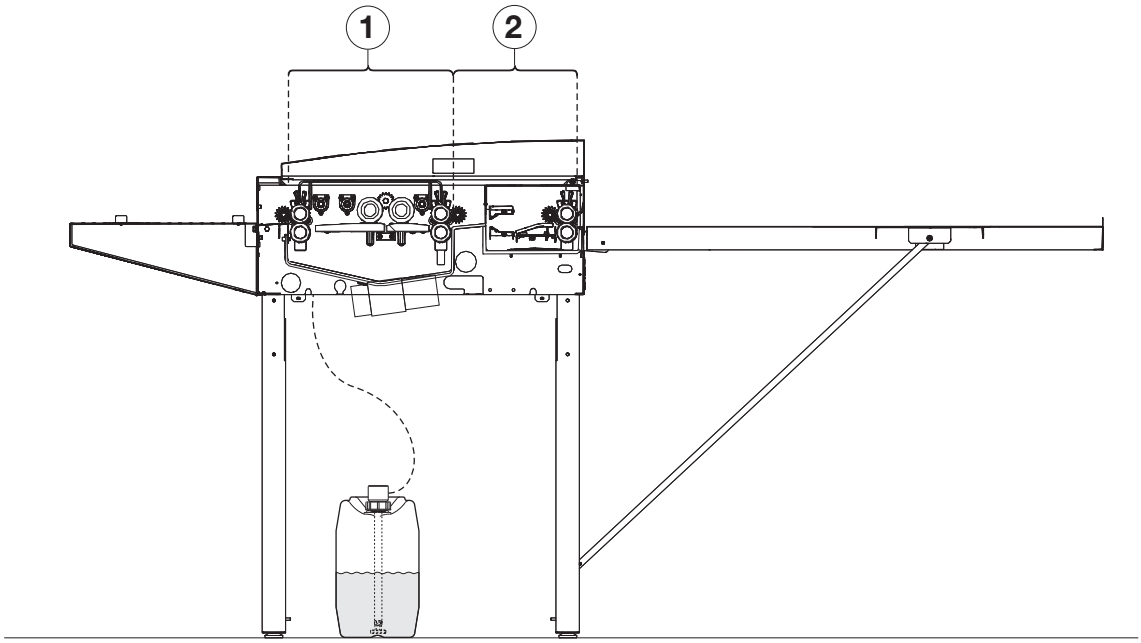
Cleaning/gumming (1)

Removing of unexposed emulsion followed by application of a thin layer of gum to protect the chemistry-free plate from oxidation, dirt, fingerprints etc.

Dryer (2)

Drying of the plate to ensure immediate handling of the plate.

The sections are described in detail on the following pages.



Cleaning/gumming section

(See illustration below).

The unexposed emulsion is removed by a combination of the brush rollers and a liquid, that contains the gum solution, for a short time protection from oxidation.

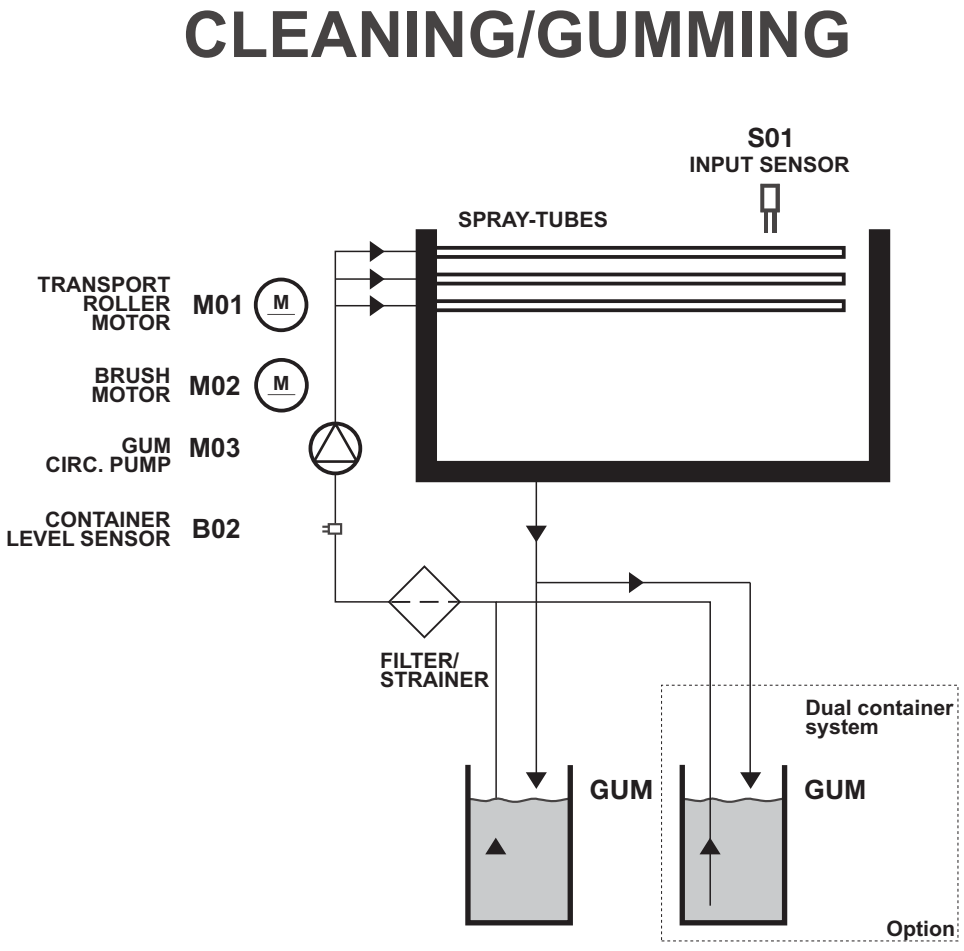
Recycling system

A pump (M03) applies the gum from the container through the spray tubes onto the plate. The cleaning section, pump and container are connected in a closed system, so the excessive solution returns to the container through the section drain.

Gum level control

The hose in the gum is equipped with a level detector circuit (B01) to make sure that the system does not run with an empty container.

The unit will only work with the specified liquids in process mode (no water).

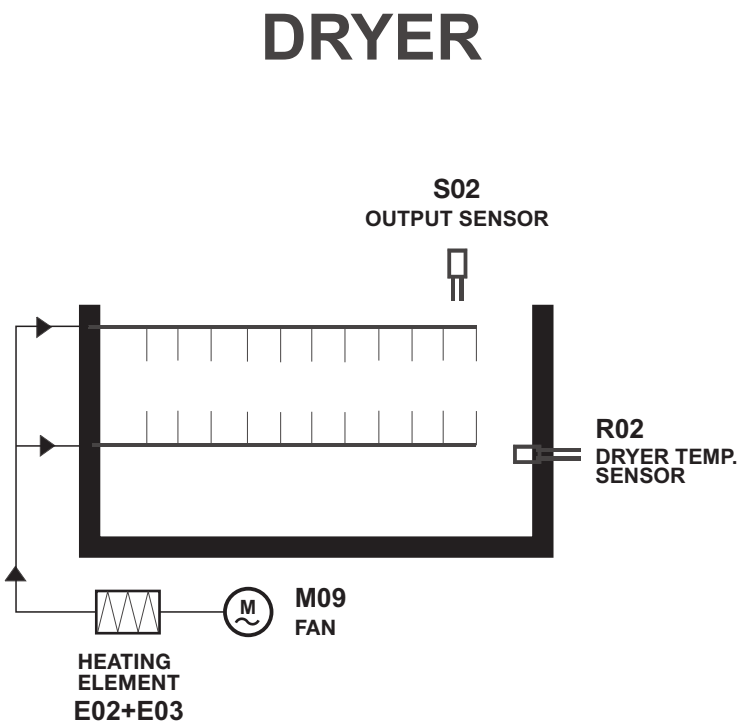


Dryer section

(See illustration below).

In the dryer section the plate is dried, and so further handling of the plate is possible immediately after it exits the cleaning unit.

A fan blows hot air through a pair of air tubes and dries the plate on both sides.



Transport system

The plate is transported through the unit by a series of rollers and roller guides. The rollers are driven by a drive motor and a worm gear drive system.

See the identification roller label(s) placed on the dryer cover as a reference.

Electronic control

See illustration opposite. The electrical control system consists of:

Master input/output unit (MIO)

The electrical control system is controlled by the MIO board via the SOM (System on Module).
There are two separate communication lines (buses):

- **GNUIB** for all internal communication in the unit (RS485).
- **ETHERNET** for Remote Enabling System.

The MIO-board is equipped with a platesetter interface for communication between the unit and platesetter.

Power control unit (PCU)

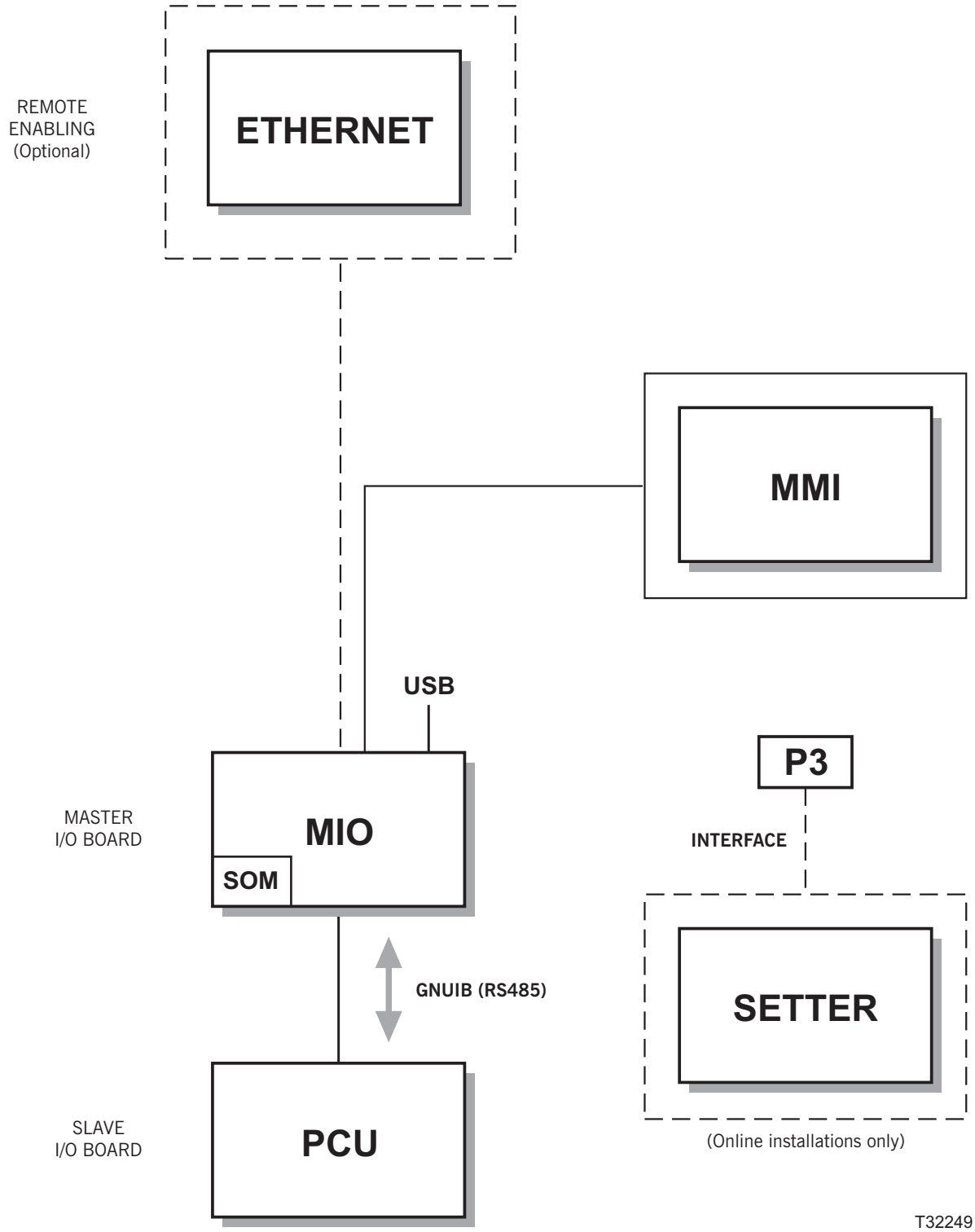
The PCU-board holds all the high voltage in- and outputs for the control of heaters, motors etc.

Control panel (MMI)

The user operates the unit from the control panel with one line display.

Setter connection

Connection of a setter interface is made to the plug P3 at the electronics cabinet.


REMOTE
ENABLING
(Optional)
ETHERNET
MMI
USB
P3
MASTER
I/O BOARD
MIO
SOM
INTERFACE
GNUIB (RS485)
SETTER
SLAVE
I/O BOARD
PCU
(Online installations only)
T32249

Controls and indicators

The unit is equipped with the function keys located on the right fender (see illustration below).

Function keys - standard function

(1) Eject plate/manual function

Starts the transport system to eject a plate jammed inside the unit.

(2) Cleaning function

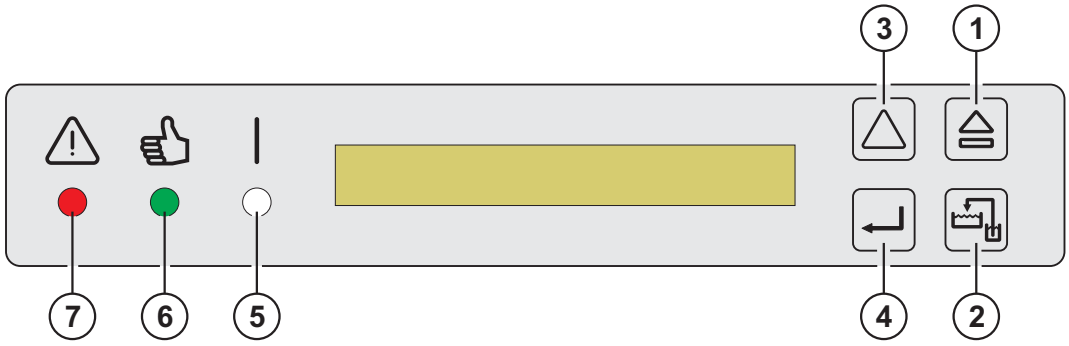
Starts the cleaning function for 10 minutes.

(3) Scroll up

Scrolls up in the menu of the control panel.

(4) Accept

Accepts the chosen function.



T32053

Function keys - service mode

To enter the service mode press scroll up button (3) until "Service/Info" appears and confirm it by pressing button (4) twice.
All service activity must be done via Remote Enabling System.

Indicators

The control panel holds 3 indicators:

(5) Power *(white)*

When this indicator lights up then the unit is powered on.

(6) Ready *(green)*

This indicator has 3 different states indicating various unit conditions:

State	Condition
Off	The unit is in sleep mode.
	The unit is powered off.
Lit	The unit is ready to accept the plates.
Flashing	The unit is initializing.
	The unit is warming up.
	The unit is currently processing a plate.

(7) Alarm *(red)*

When this indicator lights up then it indicates an alarm.

Jog function

The jog function will make the rollers and brushes turn for a while at intervals to prevent crystallization of chemicals on the rollers and brushes.
The initial jog (after power has been applied to the unit) runs for 1 minute.
After that the jog will run for 1 minute every 11 minutes.

Change of settings

Change of settings is possible only via the Remote Enabling System.

The parameters regarding brush and transport speed of the unit are set according to the recommended plate type.

Connecting to Remote Enabling

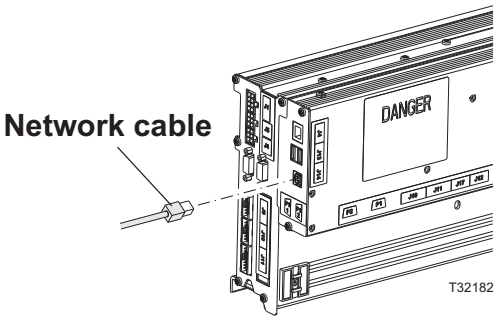
Making settings of this unit requires the Remote Enabling software and connection to a PC.

- If not already installed, please download the Remote Enabling System from www.glunz-jensen.com/support/download/software and install on a local PC. For this unit, select the Remote Enabling System for **GNUC 2**. Download and unzip the file to a separate folder on the PC's harddisk.
- To access the Remote Client, please activate the 'grclient.exe' stored in the folder 'GrClient Copy Install/GrClient'.

Tip! Copy a shortcut of the 'grclient.exe' to the PC's desktop for easy access to the Remote Client.

Electrical connection

- If a LAN (Local Area Network) cable is connected to the unit, or the PC is connected to wireless LAN, make sure to disconnect the cable/connection now.
- Connect the Ethernet cable delivered with the unit between the PC and the unit (see illustration).

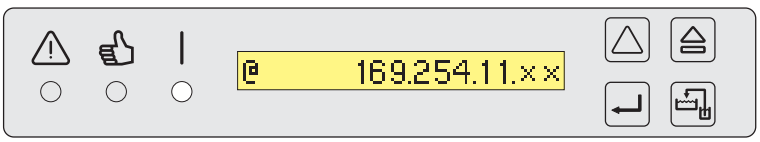


Setting up the service connection between the unit and the Remote Enabling System

- Enter the menu on the unit's control panel by pressing the △ button. See also the control panel Quick Intro guide.

If the display shows 'Service Code 2' the software configuration is missing, e.g. due to replaced SOM PCB. Back-up configuration file can be loaded with the Remote Enabling System. Please continue as described below.

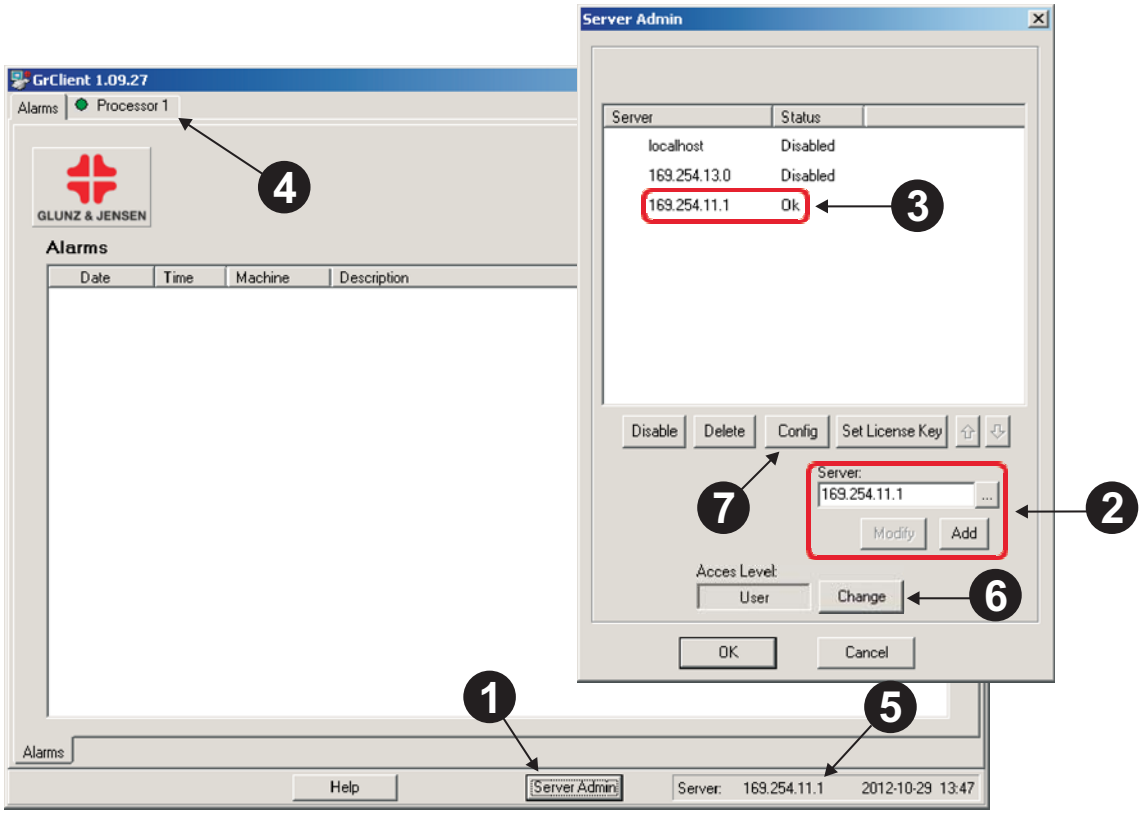
- Press △ to scroll to the Service/Info menu and press enter ↵ .
- Press △ to scroll to the LAN IP address (marked with) [1] and press enter ↵ .
- You will now see a 'service' IP address **169.254.11.xx** [2] in the display.



1) A preset IP address which needs to be changed in case the unit will be connected permanently to the Remote Enabling System via an internal network. See the Remote Enabling Installation guide.

2) This is a 'service' IP address dedicated for service technicians to connect to the Remote Enabling System either for making settings and configuration of the equipment as described in the following, or for setting up the equipment to a permanent Remote Enabling installation (permanent LAN IP address) at the customer's site.

- Make a note of the 'service' IP address. It is needed for connecting to the Remote Enabling System.
- Start the Remote Client (shortcut icon on the desktop).
- In the Remote Client select ‘Server Admin’ (1). See illustration below.
- Enter IP address from the unit (169.254.11.x) in the 'Server' field (2) and click 'Add'. This will create the connection between the unit and the Remote Enabling System.
- Click OK.
- Check that connection to the unit is established:
  - (4) The 'Processor' tap appears and the system recieves data.
  - (5) The IP address appears in the 'Server' field when pressing the tap (4).



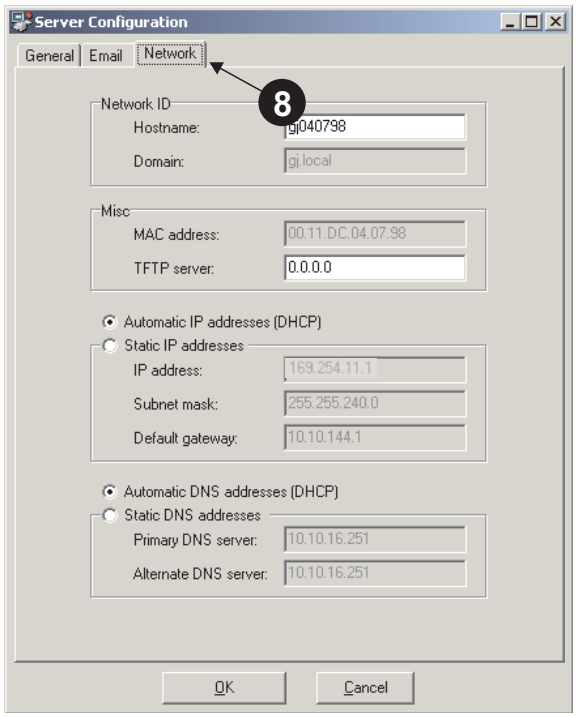
For more information about the Remote Enabling System please see the general installation manual enclosed with the Remote Enabling software.

Static IP address setting

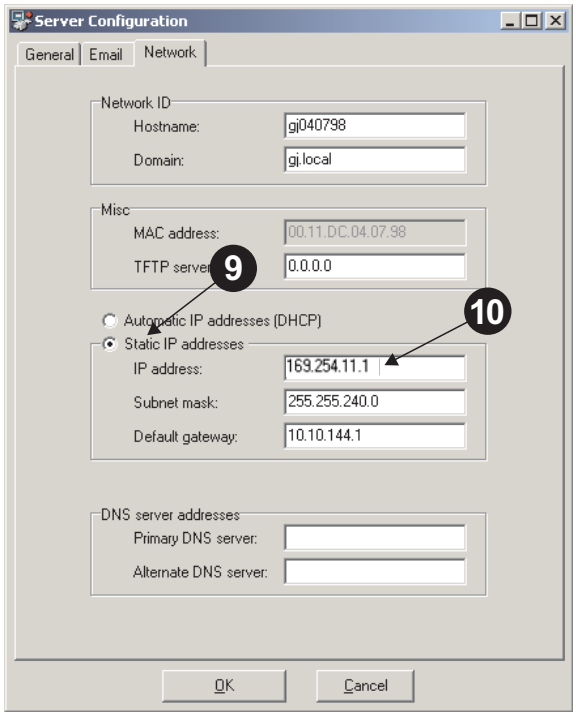
In case of a permanent connection to a local installation of the Remote Enabling System via a LAN the IP address of the equipment needs to be set to a static IP address:

- Contact the local IT administrator for obtaining an IP address.
- Enter 'Server Admin' (1).
- Select the unit IP address 169.254.11.xx (3) and click 'Change access level' (6).
- Enter Password 'duy'.
- Select 'Config' (7)

- Select 'Network' (8).



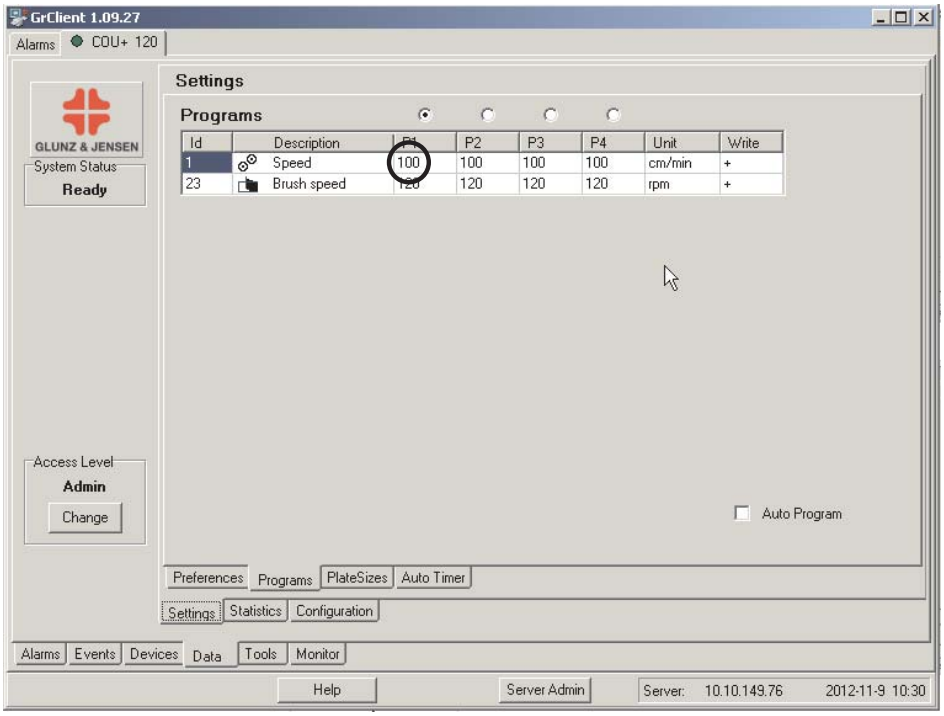
- Select the static IP addresses (9) and change the IP address field (10) to the IP address informed by the IT administrator .
- Click OK and confirm 'Restart' by pressing 'OK'.



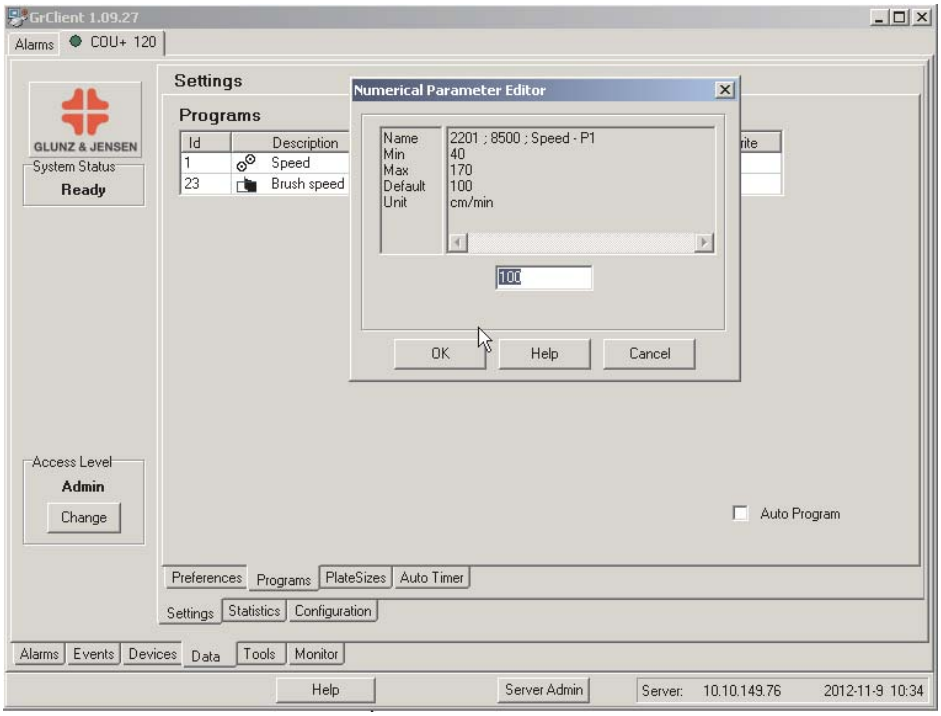
- When the Remote Enabling is ready, please verify, on the unit's control panel, (by scrolling to the IP address marked with) that the IP address now listed is identical to the one added in 'Static IP address' (9) in the Remote Enabling System.

Change of unit´s parameters

- Press the unit tab (4).
- Select Data -> Settings -> Programs
- The unit's parameters list will be shown in the 'Settings' view and new settings can be made.



- Double click on the parameter.



- Change the value of the parameter.
- Press OK.

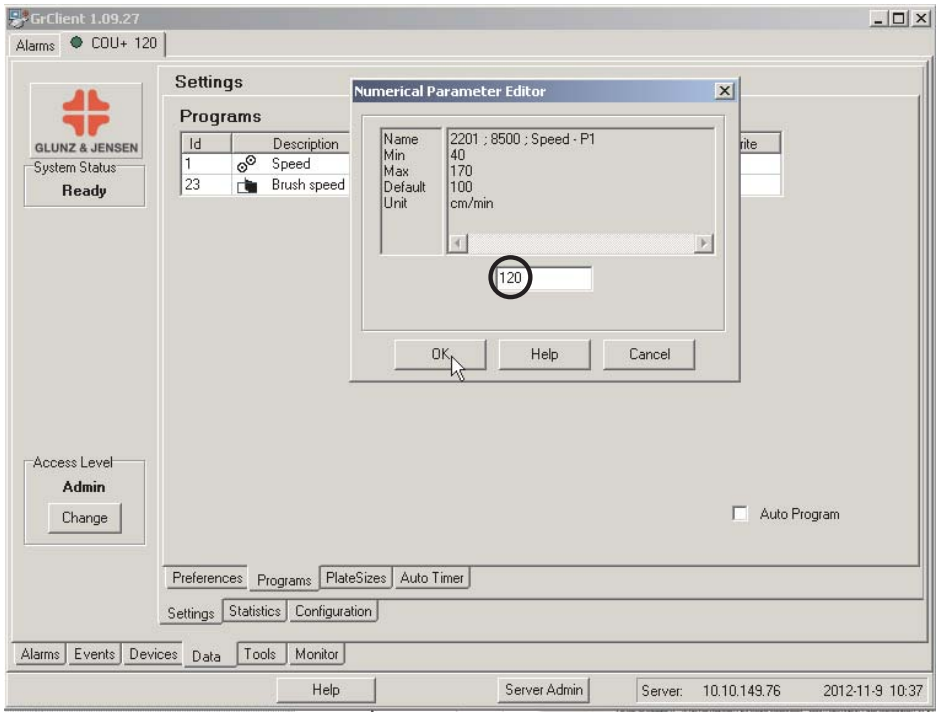
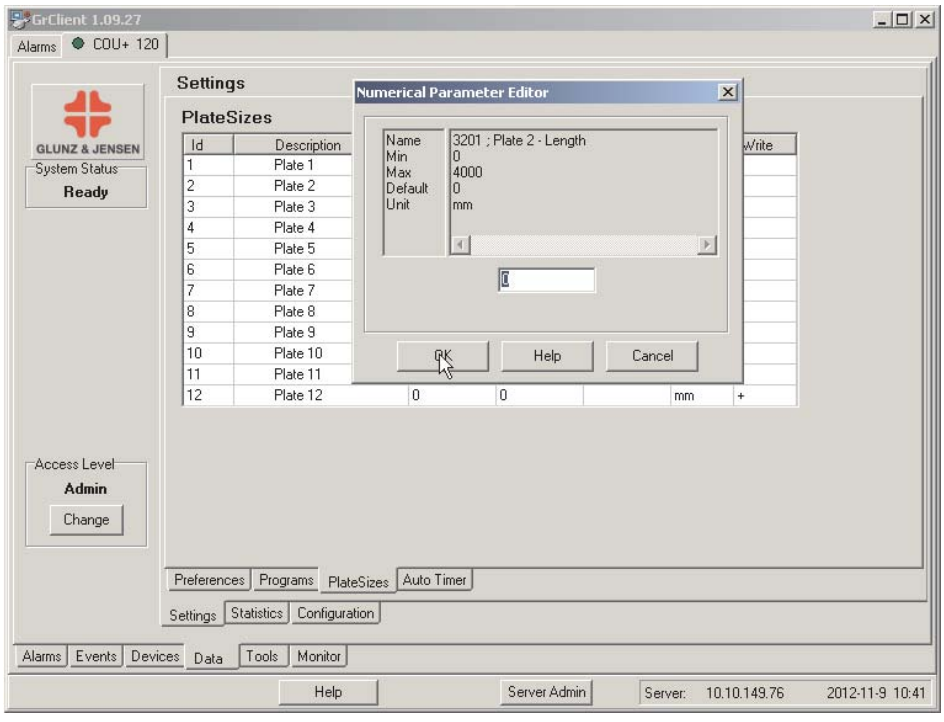


Plate sizes

Plate sizes must be entered in order to obtain exact calculation of replenishment.

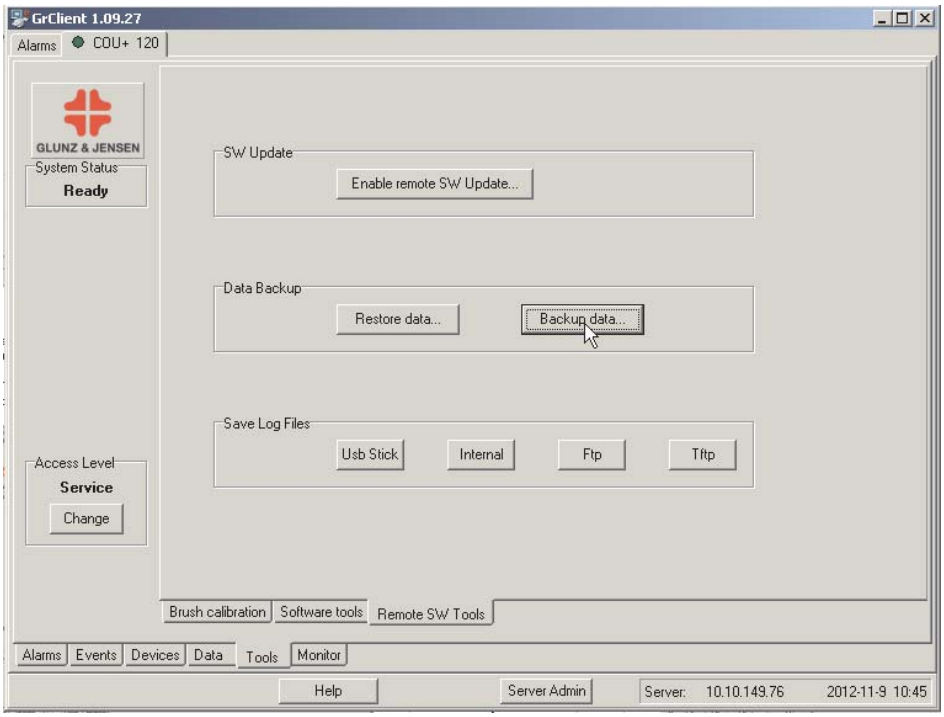
- Select 'Data' -> 'Settings' -> 'Plate sizes'.
- Define new, or select already used plate sizes.



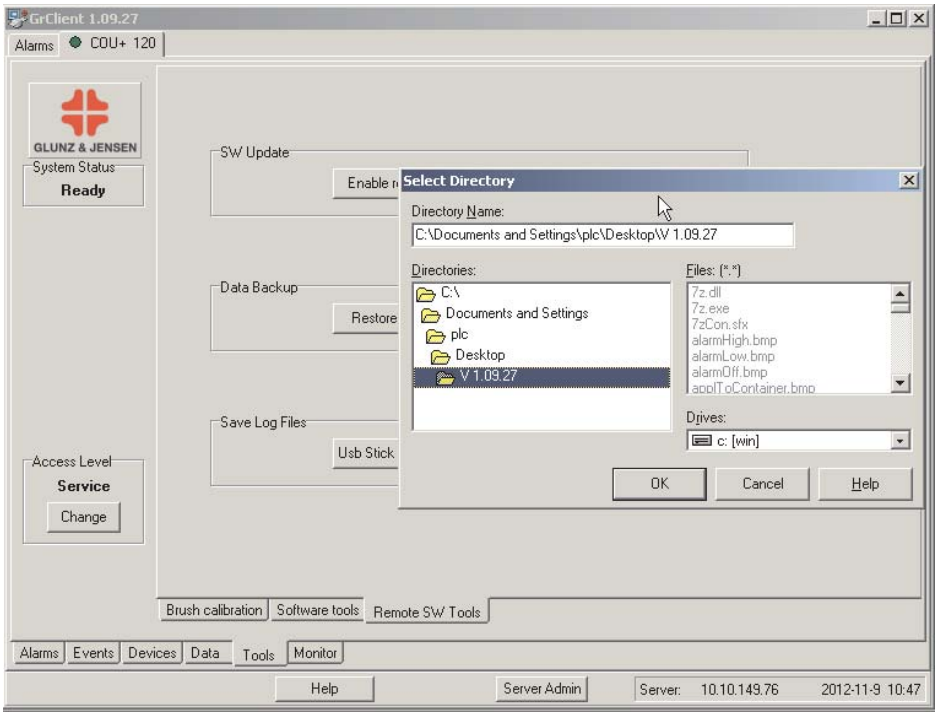
Configuration file

Save a copy of the configuration file locally, and on the USB stick once the installation is finished.

- Set access level to 'Service'.
- Go to 'Tools' -> 'Remote SW Tools'.
- Click 'Backup data'.



- Select the folder where the file will be saved and click OK.



Part 4: Maintenance

General

This chapter holds the special service information such as adjusting and cleaning procedures.

For user related maintenance and cleaning procedures please refer to the separate Cleaning and Maintenance Guides delivered with the cleaning unit.

Download of software for upgrade or repair purpose is available from the manufacturer's web site: www.glunz-jensen.com.

WARNING!
Please note that where this label appears on the unit, electrical shock hazard still exists when the main switch is turned off.

DANGER
ELECTRICAL SHOCK HAZARD
DISCONNECT ALL EXTERNAL POWER SUPPLY BEFORE SERVICING
TO BE SERVICED BY AUTHORIZED PERSONNEL ONLY
RISQUE DE CHOC ÉLECTRIQUE
AVANT TOUTE INTERVENTION, DÉBRANCHER TOUTES LES SOURCES DE COURANT
MAINTENANCE PAR PERSONNEL AUTORISÉ SEULEMENT

WARNING!
When performing any service, maintenance, calibration, or trouble shooting etc. it may be necessary to override the function of the unit's interlock switches.
In these cases please be aware, that the unit's JOG-function is still active, making the drive system run idle at intervals.

Safety check

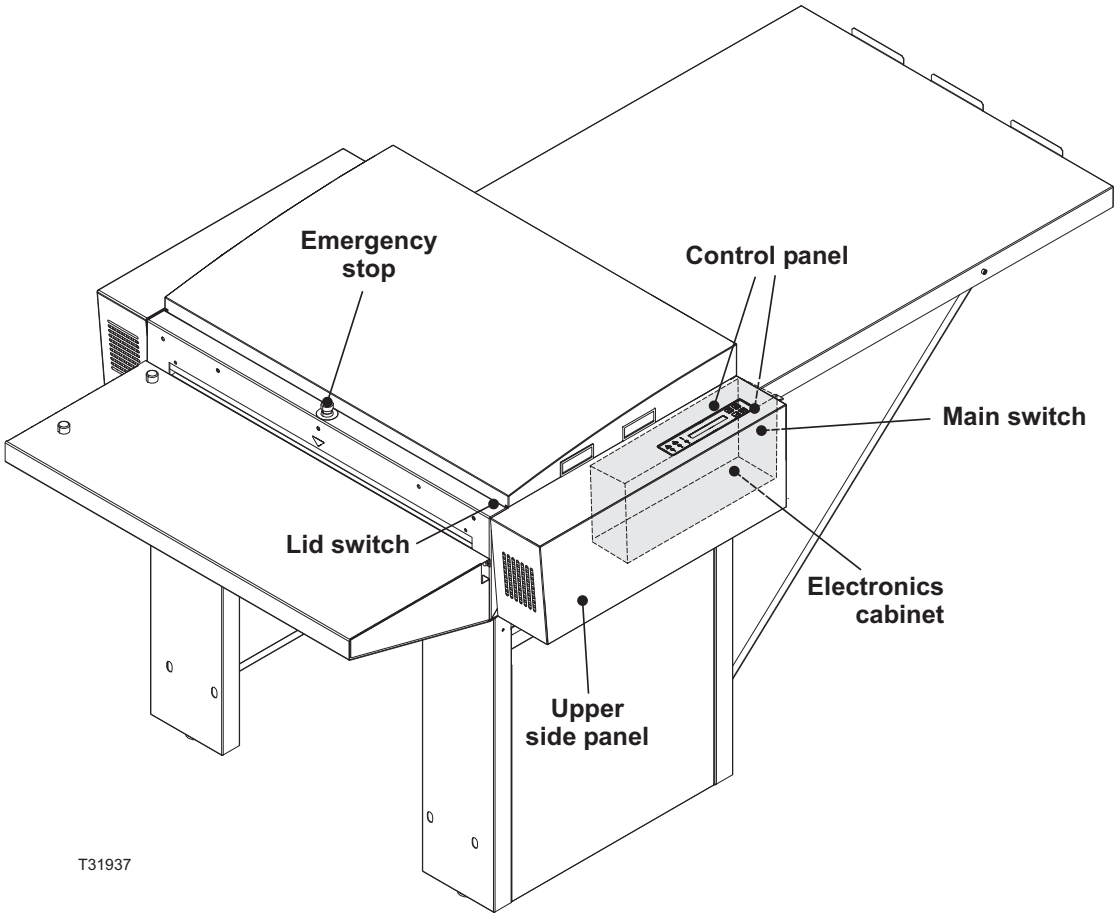
Below described safety check should be performed at least once a year.

Electrical

(Refer to the electrical diagrams in the back of this manual).

Check proper function of:

- Lid switch. Cleaning unit must stop when the switch is deactivated.
- Main switch. Cleaning unit must turn off when set to "0".
- Emergency stop. The cleaning unit must turn off when activated.



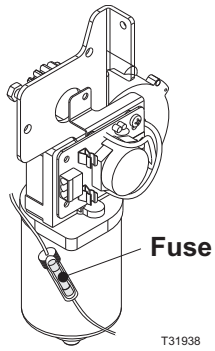
Mechanical

Check proper function/location of:

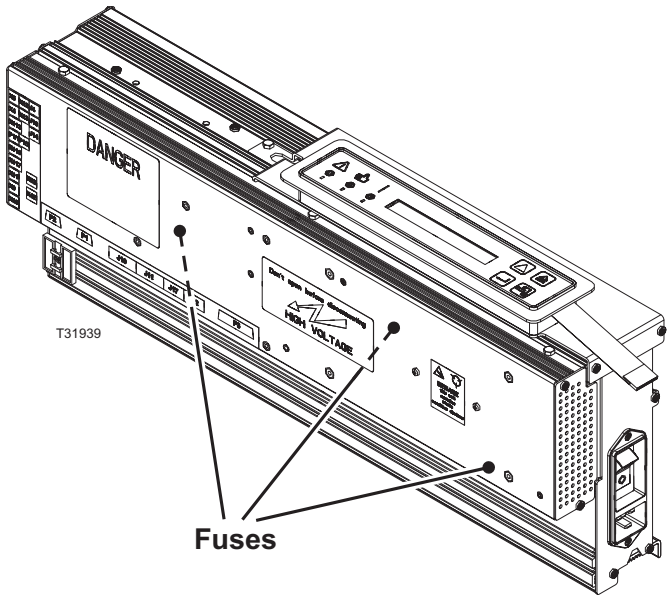
- Side fenders, left/right. Make sure the fenders are properly secured with 2 screws each.
- Cover, electronics box. Make sure cover is secured by screws.

Fuses

Fuses for motors are placed in the fuseholders in the cables by the motors behind the left fender.



Other fuses for the various functions are located in the electronics cabinet behind the right fender. The fuses are placed on the PCU board and in the fuseholder on the inside of the cabinet bottom and on the PSU board on the inside of the cabinet lid.



When changing a fuse, first switch off all power to the machine.
Always ensure that the new fuse is of the correct rating according to the label.

Motor fuses

Fuse	Fuse for	Type/Part no.
F17	Transport motor M1	4AT, 6.3 X 32 mm S/B 6896
F18	Developer brush motor M2	4AT,6.3 X 32mm 6896

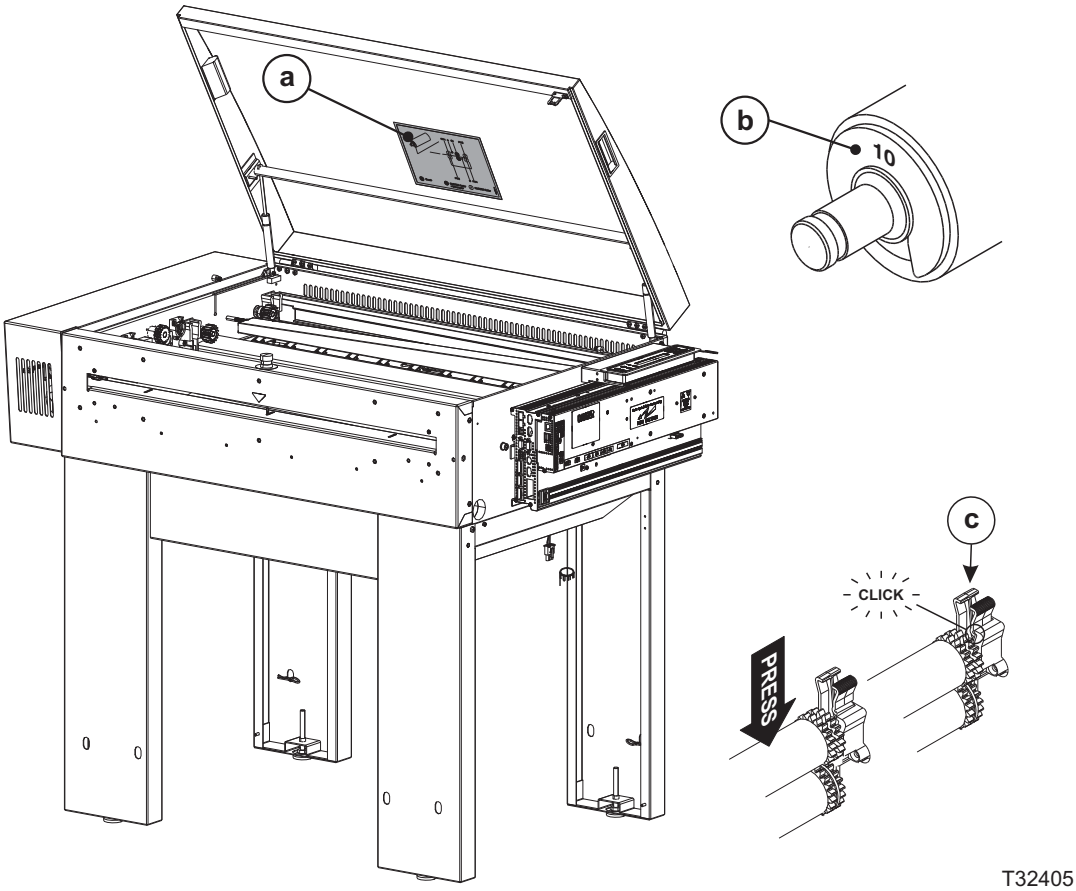
PCB fuses

Fuse	Fuse for	Type/Part no.
F1 & F2 & F3	Main power supply	12AT, 6.3 x 32 mm 5527

Rollers and brush rollers

General

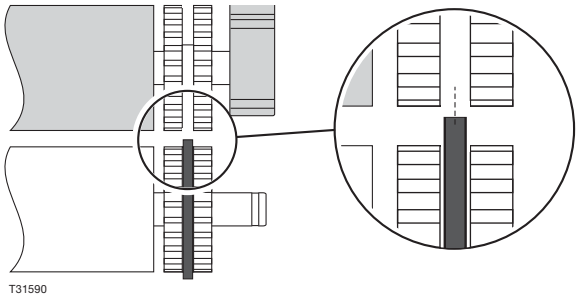
On the top cover from inner side there is mounted label **(a)** showing the roller configuration.
Each roller is marked with a small number **(b)**. Install the rollers by referring to the roller numbers shown on the label(s).
Press down in each side on the upper rollers as indicated **(NB! Drive side first)** to lock them. When the roller bearings **(c)** "click" they are properly secured.



T32405

Installation of rollers

Make sure to align the gears on the upper and lower rollers.
The gear on the lower rollers has a plate/guide that must fit into the gear of the upper rollers.



T31590

Cleaning

IMPORTANT!

Thorough cleaning of the unit tank interior, tank parts, pumps, filters etc. on a regular basis will minimize the risk of sediment build-up in and around vital parts of the equipment and prolong the lifetime of the equipment.

Cleaning accessories

Never use any hard tools or abrasive materials when cleaning any part of the unit.

Apron, rubber gloves and eye goggles.
For personal protection

Lint-free cloth, sponge and soft brush.
For cleaning of rollers, guides, tank walls, and all surfaces, especially the exit table and the feed table (if fitted).

Long-handled bottle brush and thin wire (i.e. Paper clip).
For cleaning the inside and the holes of the spray tubes.

Cleaning agents

Never use cleaning agents containing chlorinated solvents, acetic or phosphoric acid. These constitute a health hazard and could damage the unit.

Cleaning components with anything other than a mild detergent or a recommended cleaning agent may cause irreversible damage and invalidate any warranty.

Standard recommendations

Warm water 35-40°C (95-104°F).
For normal cleaning purposes and to rinse after using other cleaning agents.

Citric acid 10%/Nitric acid 5%
For major cleaning purposes.

Commercially available biocide/strong alkalic liquid
For cleaning off heavy algae-, fungal- or bacterial growth in the wash section.

Special recommendations

As some chemicals may require special cleaning agents, contact your chemicals supplier for recommendations about cleaning agents for your unit.

Adjustment and cleaning of spray tubes

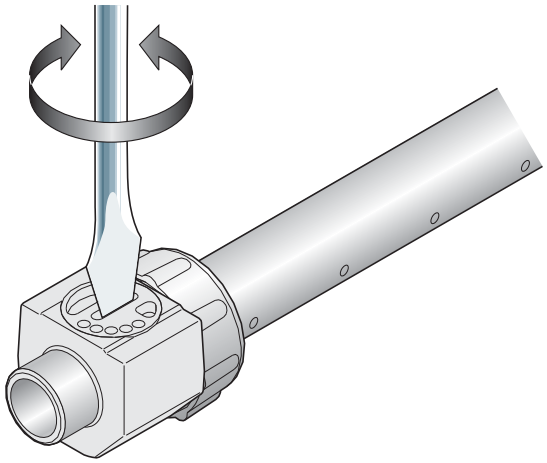
Adjustment

The pressure in the spray tubes can be adjusted to obtain the best possible application of gum to the plate. Pressure can be adjusted using a screwdriver as shown on the illustration below.

The valve is fully open from the factory. Normally no adjustments are necessary.

Cleaning

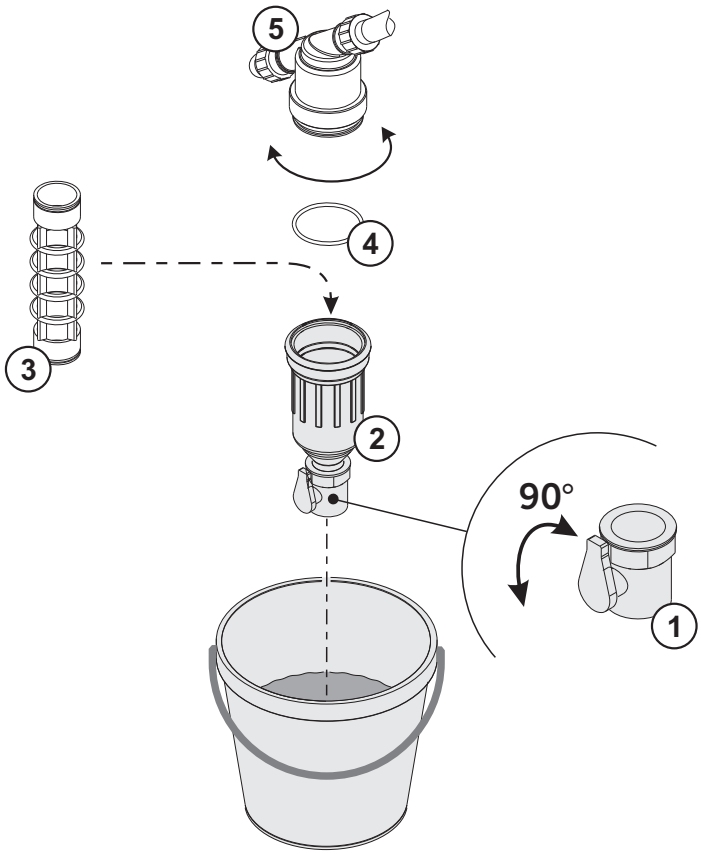
Clean the spray tubes with hot water to remove potential blocking of the holes. Occasionally, depending on the local water quality, it may be necessary to use a drill bit to clean the holes and remove sediments mechanically.



Changing/cleaning of filters

Change/clean the filters regularly as described opposite:

- Open the drain valve **(1)** to empty the filter vessel **(2)** of gum solution.
- Unscrew the filter vessel.
- Take out the filter insert **(3)** and clean/replace it.
- Reinstall the filter insert.
- Remount the filter vessel and make sure the o-ring **(4)** fits properly into the groove in the upper filter housing **(5)**.
- Close the drain valve.



Cleaning cycle

The cleaning cycle works by means of the circulation pump which lets in fresh water through a spray tubes.

The cleaning cycle should be performed once a day. See how to run the cleaning cycle in the User Manual delivered with the unit.

Main cleaning

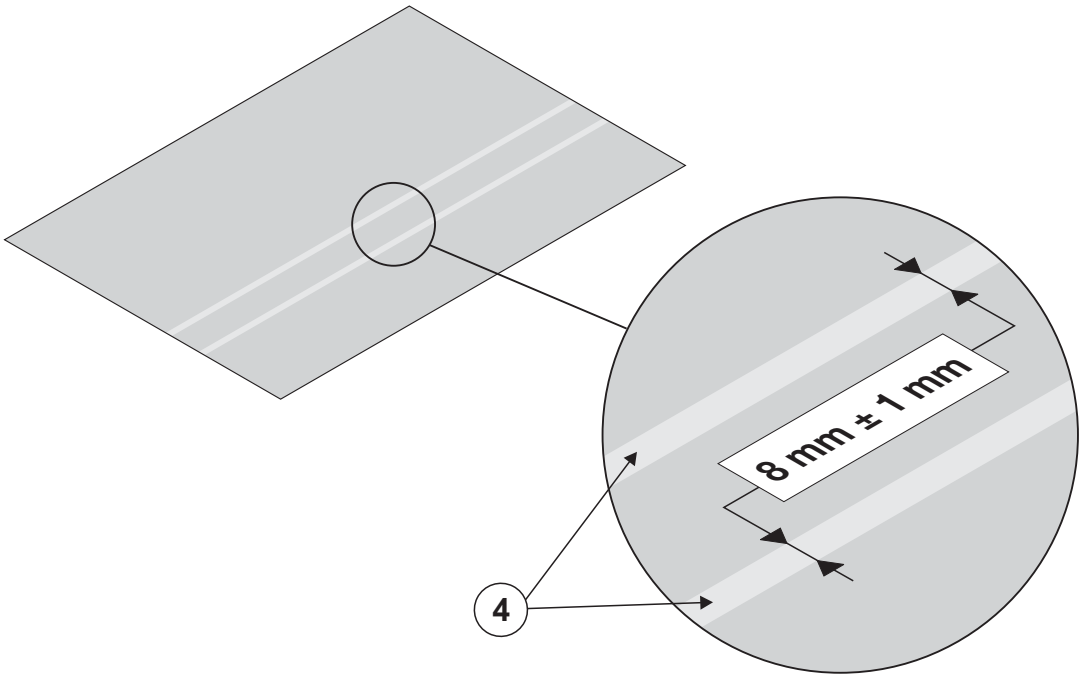
Perform the main cleaning after washing/gumming 900 m² of plates. See how to perform the cleaning in the User Manual delivered with the unit.

Adjusting of the scrub roller pressure

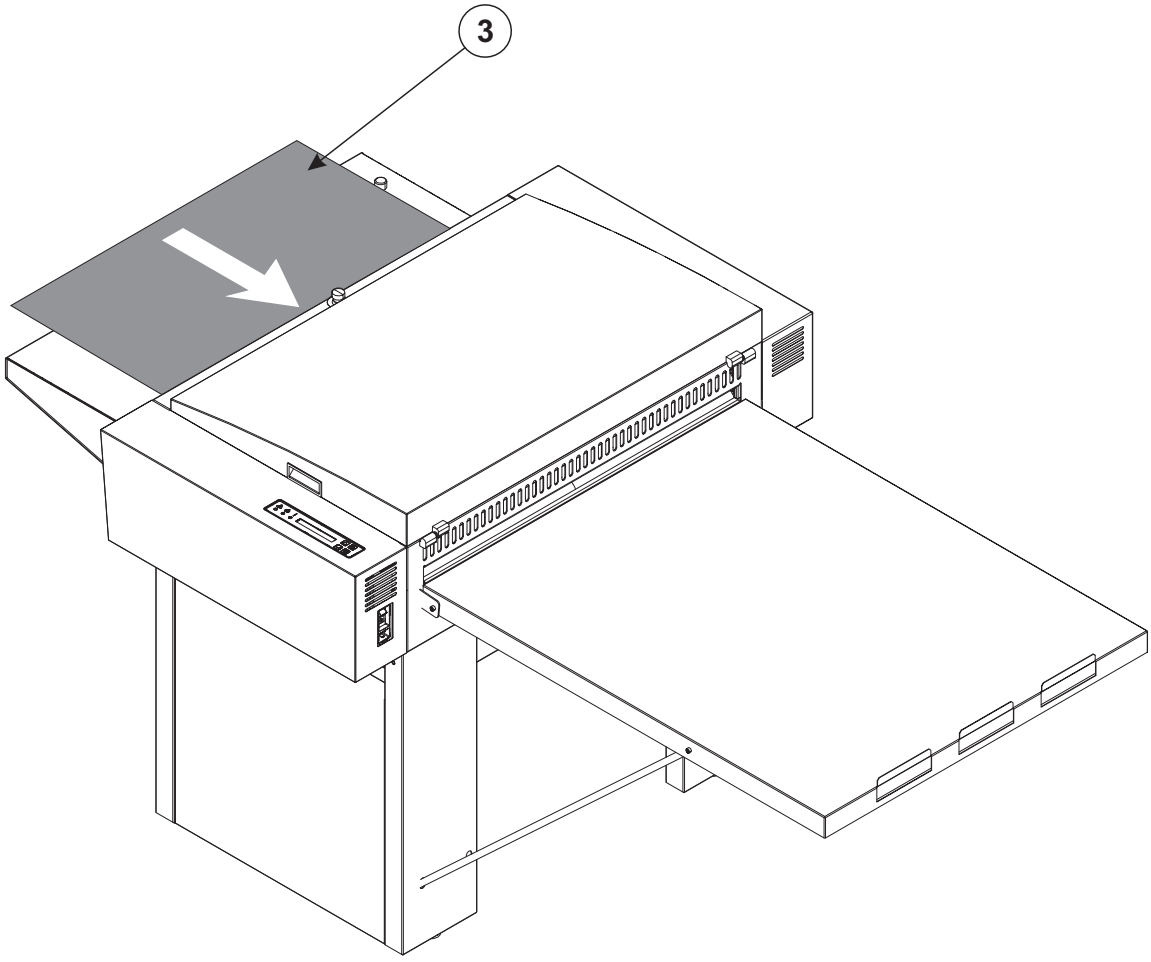
Testing the scrub roller pressure

(See illustrations opposite and below).

- Press △ **(1)** to scroll to the Service Info and press enter ↵ **(2)**.
- Press △ **(1)** to scroll to "Brush calibration" and press enter ↵ **(2)**.
- Feed an unexposed chemistry-free plate **(3)** (preferrably the biggest available size) in the centre of the feed entrance.
  The cleaning unit will lead the plate underneath the scrub rollers and stop it there for 2 min.
  The scrub rollers will rotate on the plate and leave a scrubbing trace from each scrub roller on the plate.
- When the plate exits measure the widths of the scrubbing traces **(4)**.
  It is recommended to mark the scrubbing traces width with a pencil and then measure the distance between the marks.
  The width of the traces must be **8 mm ± 1 mm** and they must be equally wide over the full plate width.
- If necessary adjust the plate tables as described in "Adjusting the plate tables" chapter on the next pages.
- Feed a new test plate to check the effect of any adjustments made.
- To leave "Brush calibration" mode press ↵ **(2)** and confirm "Exit" by pressing ↵ **(2)** again.



T32205

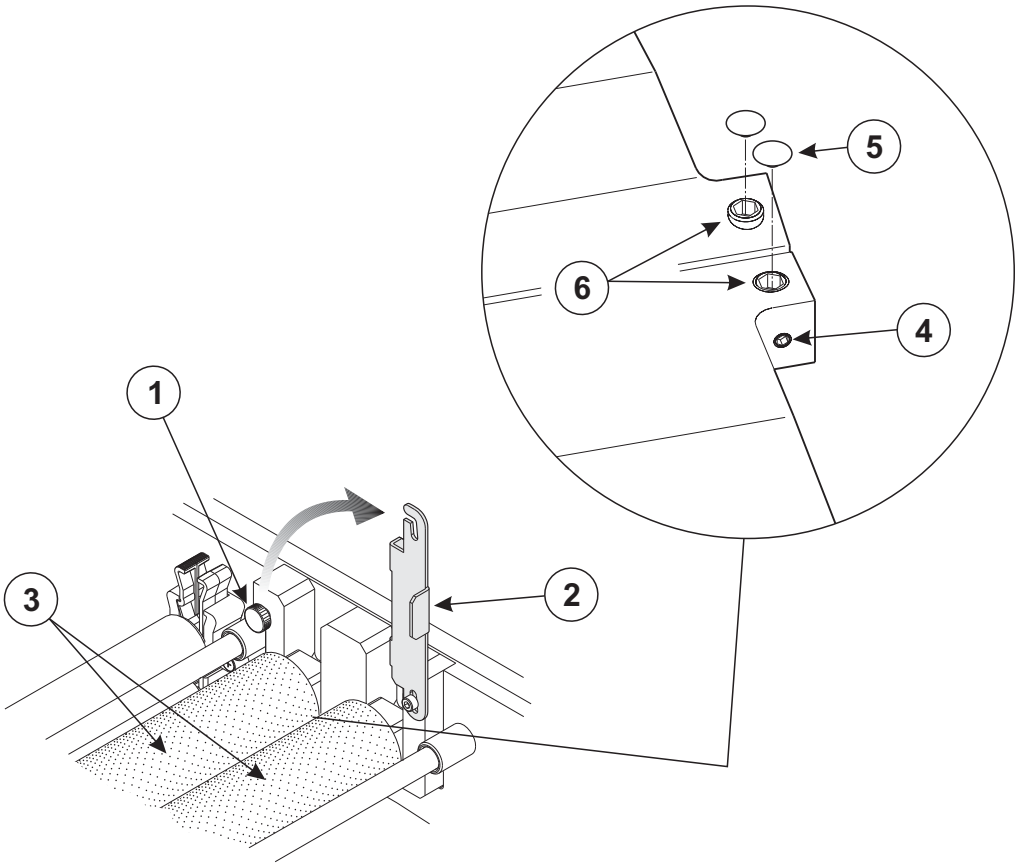


T32203

Adjusting the plate tables

(See illustration below).

- Loosen finger screw **(1)** to release the scrub roller lock bracket **(2)** then remove the scrub rollers **(3)**.
- In the support plate below the scrub roller, loosen the small Allen screws **(4)** and remove the caps **(5)** in both sides.
- Use an Allen key to make required adjustments by turning the adjusting screws **(6)** 1/4 or 1/8 turn whatever is necessary (clockwise increases scrub roller pressure).
- Insert scrub rollers and test adjustments as described in "TESTING THE SCRUB PRESSURE" on the previous pages.
- When a satisfactory scrub roller pressure has been obtained tighten screws **(4)** and insert caps **(5)**.



T32204

Preventive Maintenance Kit Program

To ensure continues high quality and maximize productivity and unit up-time, it is recommended to carry out preventive maintenance at regular intervals.

To facilitate this a Preventive Maintenance Program has been developed, consisting of a number of relevant service-parts to be replaced at specific service intervals.

It is recommended that the following Preventive Maintenance Kits are implemented, at the mentioned intervals, at which point the cycle will start over.

- Minor Preventive Maintenance at 500 production hours or every year what comes first.
- Medium Preventive Maintenance at 1000 production hours or every year what comes first.
- Minor Preventive Maintenance at 1500 production hours or every year what comes first.
- Major Preventive Maintenance at 2000 production hours or every year what comes first.

Read more about our Preventive Maintenance Kits onwww.glunz-jensen.com and see the content of the Preventive Maintenance Kits - or contact us at order-department@glunz-jensen.com.

Part 5: Trouble shooting

General

If the cleaning unit does not work properly, refer to the following pages to find the paragraph that comes closest to your problem.

The trouble shooting guide is divided into 2 sections:

A. PROBLEMS WITH THE CLEANING UNIT
B. PROBLEMS WITH CLEANED MATERIAL

For information about alarm messages see the "User manual".

For cleaning and maintenance subjects see chapter 3 in this manual and the separate Cleaning and Maintenance Guides.

The electrical diagrams are located in Appendix A.

To change a fuse, switch off all power to the machine first.
Always ensure that the new fuse is of the correct rating according to the diagram.

WARNING!
When performing any service, maintenance, calibration, or trouble shooting etc. it may be necessary to override the function of the unit's interlock switches.
In these cases please be aware, that the unit's jog function is still active, making the drive system run idle at intervals.

Before starting trouble shooting

IMPORTANT!
Plates and gum are very sensitive materials and correct storage is vital to obtain a satisfactory production result. Incorrect storage may very well result in unsatisfactory cleaning quality etc.
Contact your local supplier for information about storage requirements for plates and cleaning gum.

Before making adjustments of the equipment make sure that incorrect storage of plates and cleaning anf gumming solution can be excluded.

Problems with the Cleaning Unit

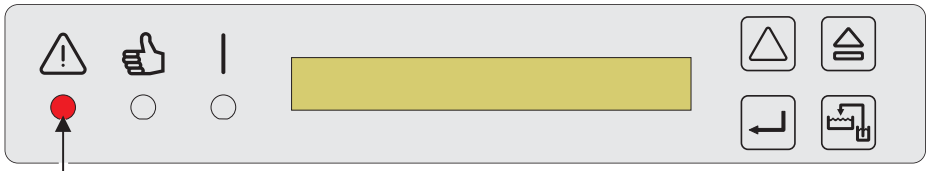
SYMPTOM	PROBABLE CAUSE	REMEDY
NO FUNCTION ACTIVE	1. Mains switch turned off or power cable not connected to main power outlet. 2. Fuse(s) blown. 3. Emergency button enabled.	1. Connect cable to main power outlet and/or turn main switch on. 2. Replace fuse. 3. Emergency button turned to be released.
CLEANING UNIT CANNOT INITIALIZE.	1. Software configuration error. 2. Defective PCB. 3. Cables not properly connected.	1. Reload software. 2. Replace PCB. 3. Check cables and make proper connections.
MACHINE WILL NOT START UP.	1. Defective PCB.	1. Replace defective part.
MACHINE DOES NOT START WHEN A PLATE IS INSERTED.	1. Input sensor (s) defective.	1. Replace defective sensor.
NO CLEANING AND GUMMING SOLUTION IS CIRCULATED ALTHOUGH MACHINE IS IN "CLEAN" MODE.	1. Gum container empty. 2. Circulation pump defective. 3. Hose blocked. 4. Electronics defective.	1. Insert full container. 2. Replace pump. 3. Clean hose. 4. Replace defective electronics.
DRYER BLOWER WORK, HEATER DOES NOT.	1. Temperature sensor defective. 2. Heating element defective. 3. Electronics defective.	1. Replace temperature sensor. 2. Replace heating element. 3. Replace defective electronics.

SYMPTOM	PROBABLE CAUSE	REMEDY
DRYER BLOWER DOES NOT WORK.	1. Blower defective. 2. Electronics defective.	1. Replace blower. 2. Replace defective electronics.
CLEANING AND GUMMING CIRCULATION PUMP RUNS BUT NO CIRCULATION. (NO ALARMS)	1. Hose blocked.	1. Clean hose.
ROLLER MOTOR DOES NOT TURN.	1. Fuse (F17) blown. 2. Motor defective. 3. Electronics defective.	1. Replace fuse. 2. Replace motor. 3. Replace defective electronics.
ROLLER DRIVE MOTOR RUNS, BUT NO PLATE TRANSPORT.	1. Drive gears and/or worms defective.	1. Check all gears and worms gears on rollers, and make sure they move freely. Replace any defective part.
SCRUB ROLLER MOTOR DOES NOT TURN.	1. Fuse (F18) blown. 2. Motor defective. 3. Electronics defective. 4. Top squeegee roller not "clicked" in bearings.	1. Replace fuse. 2. Replace motor. 3. Replace defective electronics. 4. Roller has to be pressed down. NB! Drive side first.
SCRUB ROLLER MOTOR RUNS, BUT SCRUB ROLLERS DO NOT TURN	1. Drive gears and/or worms defective.	1. Check all gears and worms gears on rollers, and make sure they move freely. Replace any defective part.

Problems with cleaned material

SYMPTOM	PROBABLE CAUSE	REMEDY
PLATE IS NOT COMPLETELY DRY	1. Cleaning and Gumming section applying to much gum. 2. Dryer section is malfunctioning.	1. Check gum section. 2. Check dryer section.
PLATE HAS STRIPES LENGTH-WISE OR CROSSWISE	1. Defective or dirty rollers or guides.	1. Take rollers and/or guides out,inspect and wash them. Rollers with dents or other marks must be changed.
CLEANING NOT SUFFICIENT	1. Spray tube clogged. 2. Scrub roller not turning. 3. Scrub roller pressure not sufficient. 4. Gum pump does not run.	1. Clean spray tube. 2. Check the brush and fix the problem. 3. Replace scrub roller. 4. Check pump function as described earlier in this section.
PLATE HAS AN UNEVEN GUMMING	1. Gum container nearly empty. 2. Cleaning/gumming section exit rollers dirty. 3. Gum pump clogged.	1. Refill container. 2. Take rollers out and clean them. 3. Run "RINSE" function to clean pump. See "USER MANUAL" for references.

Alarm list



ALARM TYPE	ALARM ID	ALARM INDICATOR (• = ON)	CLEANING UNIT REACTION	SIGNAL TO SETTER
COVER OPEN	1		STOP	BUSY
LOW DRY TEMP	6			BUSY
HIGH DRY TEMP	7			BUSY
LOW SPEED	8	•		BUSY
HIGH SPEED	9	•		BUSY
PLEASE CHECK CIRCULATION IN TANK	10	•		BUSY
TEMP REG ERROR	17	•		ERROR
TACHO SIGNAL MISSING	18	•	STOP	ERROR
PLATE HAS JAMMED	20	•	STOP	ERROR
UNEXPECTED LON PLATE HAS BEEN DETECTED	22	•		BUSY
CALIBRATING	27			BUSY
UNEXPECTED SENSOR READINGS	29	•		BUSY
CHECKSUM ERROR IN RTC MEMORY, PROBALBY COUSED BY LOW BATTERY POWER	30	•		ERROR
APPLICATION CONTAINER IS EMPTY	31	•		BUSY

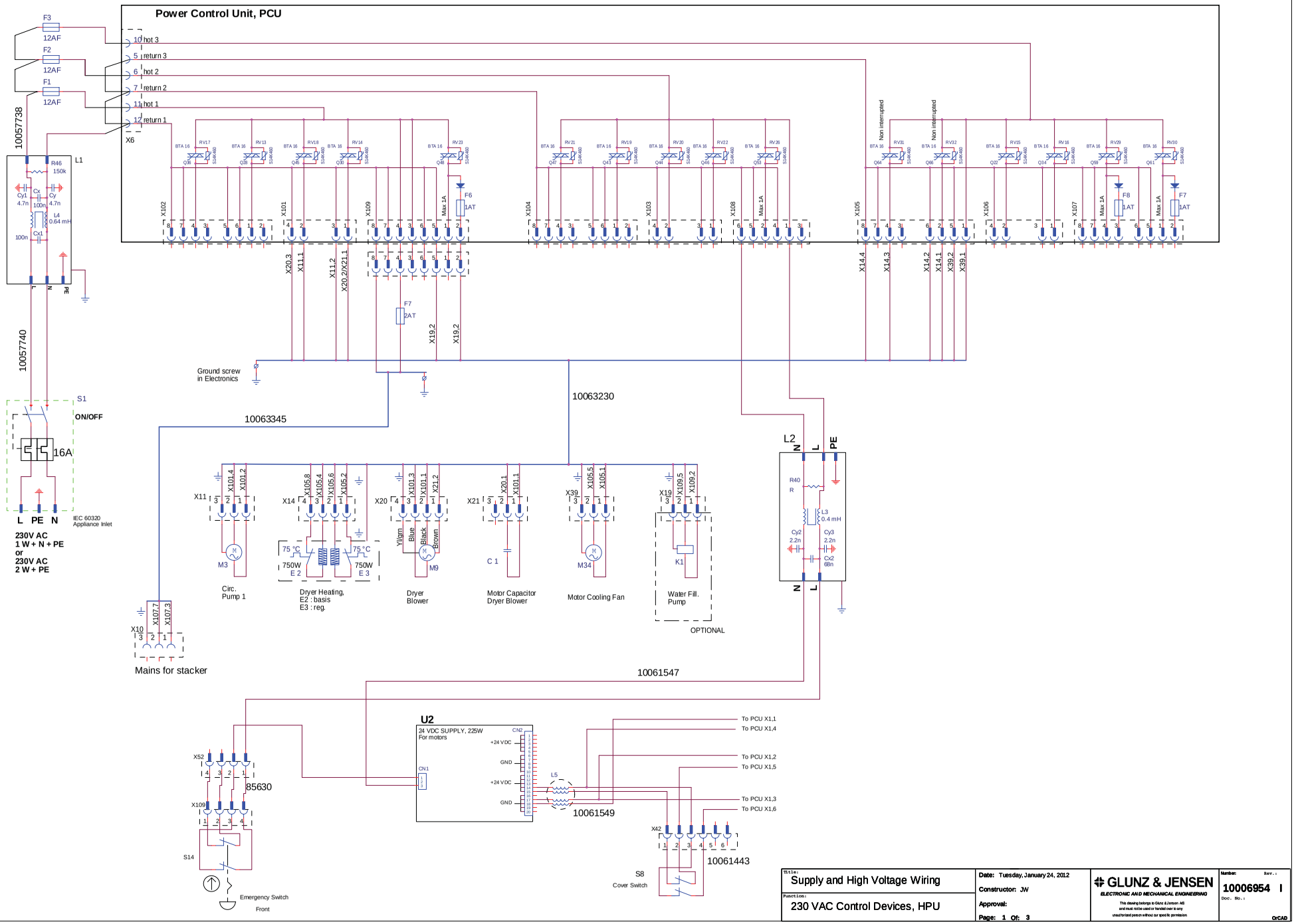
ALARM TYPE	ALARM ID	ALARM INDICATOR (• = ON)	CLEANING UNIT REACTION	SIGNAL TO SETTER
FILL-UP CONTAINER IS EMPTY	34	•		
PROCESSOR IS IN CLEANING MODE	46			
CONNECTION TO IO BOARDS FAILED. POWER DOWN, SOLVE PROBLEM AND THEN POWER UP SYSTEM	67	•		ERROR
PLATE HAS PASSED THE OUTPUT SENSOR TOO FAST	111			
PLATE HAS REACHED THE OUTPUT SENSOR TOO FAST	112			
SYSTEM HAS STARTED IN SAFE MODE DUE TO FAILED STARTUP	130	•	STOP	
UNEXPECTED TEMPERATURE RISE IN DRYER	140	•		ERROR
MAJOR PREVENTIVE MAINTENANCE IS RECOMMENDED	143	•		
MEDIUM PREVENTIVE MAINTENANCE IS RECOMMENDED	144	•		
MINOR PREVENTIVE MAINTENANCE IS RECOMMENDED	145	•		

Appendix A: Electrical diagrams

This chapter includes all electrical diagrams for the cleaning unit.

The diagrams (3 pages) cover:

Page 1 of 3: Supply and High Voltage Wiring
Page 2 of 3: Motors and Internal Bus Wiring
Page 3 of 3: Low Voltage Wiring


Power Control Unit, PCU
F3
12AF
F2
12AF
F1
12AF
10 hot 3
5 return 3
6 hot 2
7 return 2
11 hot 1
12 return 1
X6
10057738
L1
R46
150k
Cy1
4.7n
Cx
100n
Cy
4.7n
L4
0.64 mH
Cx1
100n
L
N
PE
10057740
S1
ON/OFF
16A
L PE N
IEC 60320
Appliance Inlet
230V AC
1 W + N + PE
or
230V AC
2 W + PE
Non interrupted
Max 1A
F6
1AT
F7
2AT
F8
1AT
F7
1AT
Ground screw
in Electronics
10063345
10063230
X11
M3
Circ.
Pump 1
X14
75 °C
750W
E 2
75 °C
750W
E 3
Dryer Heating,
E2 : basis
E3 : reg.
X20
Yl/grn
Blue
Black
Brown
M9
Dryer
Blower
X21
C 1
Motor Capacitor
Dryer Blower
X39
M34
Motor Cooling Fan
X19
K1
Water Fill.
Pump
OPTIONAL
L2
N
L
PE
R40
R
L3
0.4 mH
Cy2
2.2n
Cy3
2.2n
Cx2
68n
X10
Mains for stacker
10061547
U2
24 VDC SUPPLY, 225W
For motors
CN2
CN1
+24 VDC
GND
+24 VDC
GND
L5
10061549
To PCU X1,1
To PCU X1,4
To PCU X1,2
To PCU X1,5
To PCU X1,3
To PCU X1,6
X52
85630
X109
S14
Emergency Switch
Front
X42
10061443
S8
Cover Switch
Title:
Supply and High Voltage Wiring
Function:
230 VAC Control Devices, HPU
Date: Tuesday, January 24, 2012
Constructor: JW
Approval:
Page: 1 Of: 3
GLUNZ & JENSEN
ELECTRONIC AND MECHANICAL ENGINEERING
This drawing belongs to Glunz & Jensen A/S
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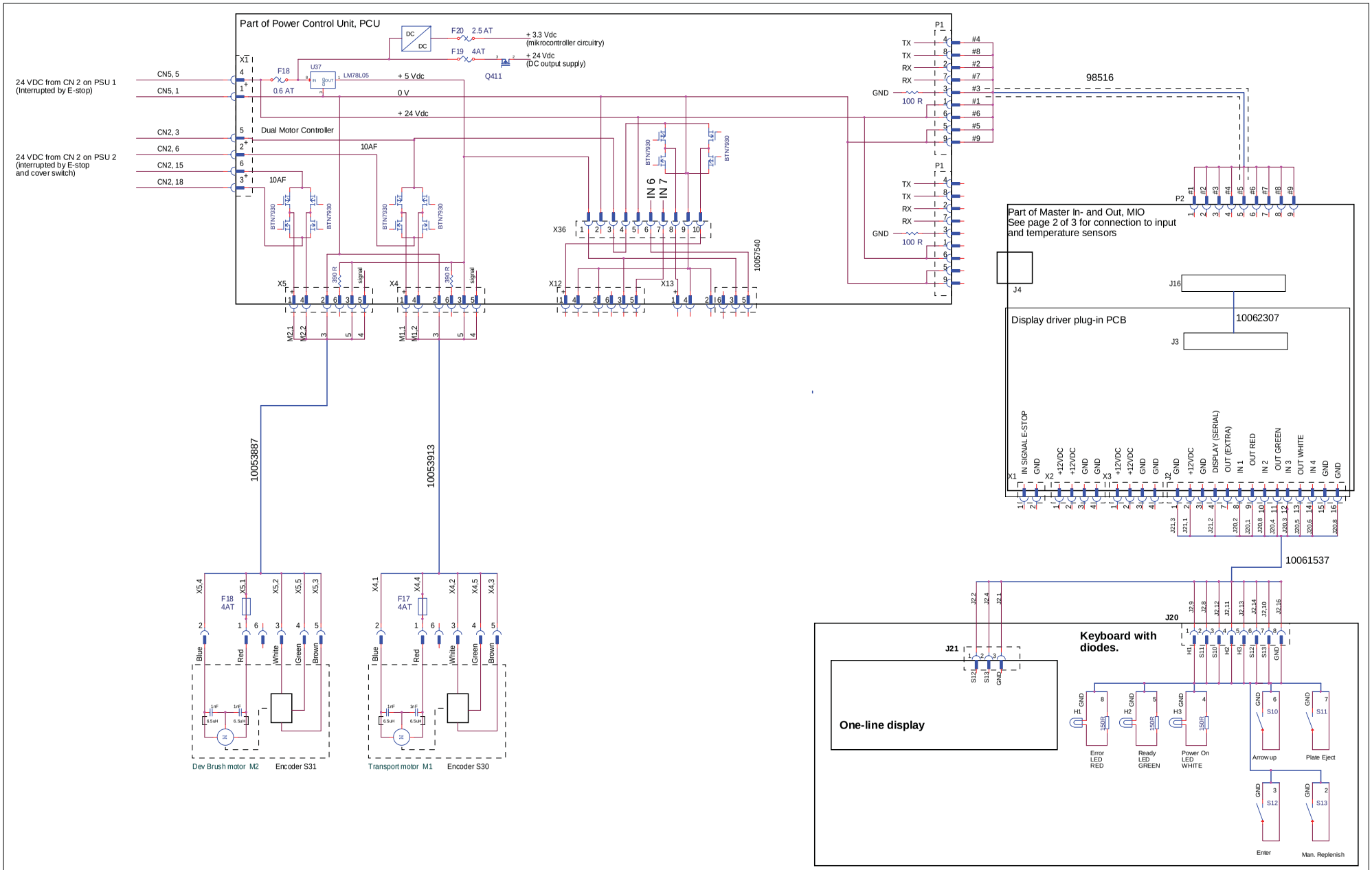
Number:
10006954
Rev.: I
Doc. No.:
OrCAD



Title: Motors And Internal Bus Wiring	Date: Tuesday, January 24, 2012	GLUNZ & JENSEN ELECTRONIC AND MECHANICAL ENGINEERING
Function: 8, 24 and 35 VAC Distribution	Constructor: JW	Number: 10006954 Rev.: I
	Approval:	Doc. No.:
	Page: 2 Of: 3	OrCAD

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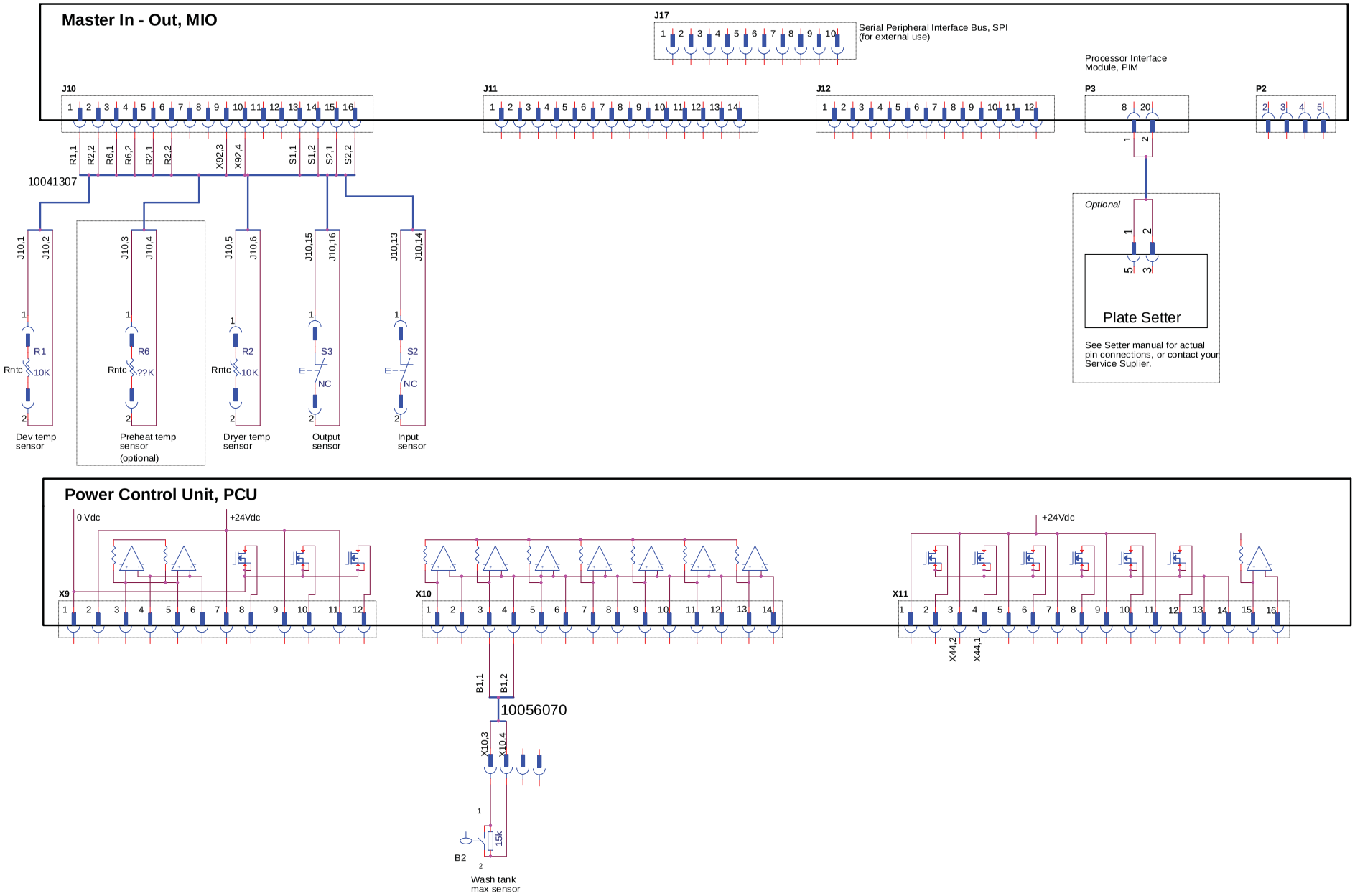

Title: Low Voltage Wiring	Date: Tuesday, January 24, 2012	GLUNZ & JENSEN ELECTRONIC AND MECHANICAL ENGINEERING	Number: 10006954 Rev.: I
Function: Sensors And Control Devices	Constructor: JW Approval: Page: 3 Of: 3	This drawing belongs to Glunz & Jensen A/S and must not be used or handed over to any unauthorized person without our specific permission.	Doc. No.: OrCAD